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OFFICE PRACTICE *and* BUSINESS PROCEDURE

FLORENCE E. MEGILL

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OFFICE PRACTICE AND BUSINESS PROCEDURE

By

FLORENCE E. McGILL, B.A., B.C.S.

JULIA RICHMAN HIGH SCHOOL
THE CITY OF NEW YORK

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PREFACE

THIS book is an elementary treatise on office practice and business procedure. It is designed as an introductory textbook for immature students who are unacquainted with the organization and management of large business houses. Simple in style, it will enable the student to acquaint himself with the best methods of handling business and commercial papers and office appliances. The aim is, to give a regular business office training by presenting practical problems in the classroom such as a junior clerk will be expected to understand.

In a business office an employee is not only required to understand the theory of his assigned tasks, but he must know how to work out that theory in practice. If he knew all the necessary requirements for filing a letter and had never actually filed a letter in a folder in a drawer of a filing cabinet, his theoretical knowledge of filing would be of little value to him in business.

Students using this book become acquainted with the different features of office routine. In other words, they are continually in a "business atmosphere." The efficient office assistant must be thoroughly equipped with a knowledge of the "machinery" of a modern business office. When he accepts his first business position he must be confident of his ability to perform the assigned task in an intelligent and efficient manner without supervision. In the opinion of the author the ideal method is to "learn to do by doing." The plan of organizing the class into an office force gives the student an opportunity to acquaint himself with modern business requirements and, as far as possible, to get his practice in a real business atmosphere.

PREFACE

The book is graded to meet the needs of students in the junior high school and in the first, second, and third terms of the senior high school. Every assignment contained in this book has been worked out in practical form by students in the Julia Richman High School, the City of New York, in regular class recitations.

Grateful acknowledgments are made to the many teachers and members of business houses who have made this work possible. The author desires to mention Dr. John T. Nicholson, District Superintendent of Schools, and Dr. Albert G. Belding, Director of Commercial Subjects in High Schools, the City of New York; Mr. Thaddeus Wilkerson of the Burroughs Adding Machine Company; Miss Mary F. Cahill, Miss Sadie Krupp, Miss Anna Hamill, and Miss Elizabeth F. Duffy of the Julia Richman High School; and, especially, to acknowledge her indebtedness to Dr. Michael H. Lucey, Principal of the Julia Richman High School.

The author and publisher are indebted to the Remington Typewriter Company, the Dalton Adding and Calculating Machine Sales Company, the Library Bureau, the Yawman and Erbe Mfg. Co., the Wales Adding Machine Company, the A. B. Dick Company, the National Blank Book Company, the Postage Meter Company and the New York Telephone Company for supplying illustrative material.

CONTENTS

CHAPTER ONE

PAGE

Introduction 1

CHAPTER TWO

RAPID CALCULATION AND COMMERCIAL MATHEMATICS

Horizontal and Vertical Addition. Group Method of Vertical Addition. Proof of Addition. "Casting Out 9's." Multiplication. Interest 7

CHAPTER THREE

CORRELATION OF MERCANTILE ACCOUNTS WITH OFFICE PRACTICE

Financial Statements. Information Statement or Financial Statement. Loss and Gain Statement. Balance Sheet. Transaction. Expense. Business Transactions. Inventory. Dry Goods Invoices 19

CHAPTER FOUR

BANKING AND BUSINESS PROCEDURE

Commercial and Non-Commercial Banks. Savings Banks. Difference Between a Commercial and a Savings Bank. Difference Between a Bank Note and a Bank Check. Federal Reserve Banks. Postal Savings System. Loan and Trust Companies. The Numerical Transit System. The Clearing House. Checks. Stop Payment on Checks. Indorsement of a Check. Certified Checks. How to Make Out a Check and Check Stub. A Promissory Note. Protection of Checks. Exercises. Depositors' Ledger Kept by the Bank. Reconciliation of Bank Balance. The Payroll. Trade Acceptance 61

CONTENTS

CHAPTER FIVE

SALES AND PURCHASES

PAGE

Merchandise Sales. Local Map of Your Town or City. Inter-borough Map of the City of New York, Borough of Manhattan. Salesmen's Daily Report to the Home Office While En Route. Daily Sales. Merchandise Purchases..... 104

CHAPTER SIX

THE TELEPHONE

How to Use the Telephone. How to Call a Number on the Telephone. Important Points Concerning the General Telephone Directory, the Classified and the Suburban Directory. Special Information Concerning the Use of the New York City Telephone Directory. Reference Books. Who's Who in America. City or Town Directory..... 115

CHAPTER SEVEN

THE TYPEWRITER

Position at Machine. How to Begin. Words of High Frequency. Capital Letters. Numerals. International Rules for Correcting Copy. Speed Tests. The Mechanical Arrangement of a Business Letter. The Parts of a Business Letter. Proper Margins Important. Paragraphs Relieve Monotony. How to Make Duplicate or Carbon Copies of Invoices, Bills, or Letters. The Mimeograph. How to Typewrite a Wax Stencil. The Dermatype Stencil. Directions for Cleaning and Filing Dermatype Stencil for Future Use. The Use of the Mimeograph Machine. Sales Letter Advertising Sanitary Drinking Cups..... 137

CHAPTER EIGHT

INDEX AND FILING

Indexing. Alphabetizing. Filing. Alphabetic Filing. Numeric Filing. Geographic Filing. Subject or Occupational Filing. The Shannon File. The Loose Sheet System or Flat Box File System.

CONTENTS

PAGE

The Automatic Index System of Filing. To File Under the Ten Division Automatic System. To File Under the Twenty Division Automatic System. Cross Reference and Follow Up. The Use of Tabs and Signals. Employee's Record Cards. Real Estate. Removal of Material from Files. Copies of Blank Forms. Card Index Filing..... 183

CHAPTER NINE

POST OFFICE AND TELEGRAPH

Incoming Mail. Outgoing Mail. Metered Mail. Information from the Postal Laws and Regulations of the United States. Telegrams. Mechanical Devices. The Addressograph..... 218

CHAPTER TEN

THE STORY OF THE ADDING MACHINE

Supplementary Exercises for Class Use. Some Uses for Adding and Calculating Machines. The 81-Keyboard Non-Listing, Calculating and Adding Machine. Ten-Key Adding-Calculating Machine. Vertical and Horizontal Adding. Adding Fractions. Common Fractions. Multiplication on the 81-Key Calculating Machine (Non-Listing). 10-Key Listing Machine. Subtraction on the 81-Key Machine (Non-Listing). Supplementary Exercises. Bookkeeping-Problems. Listing and Non-Listing Machines. Accounting and Business Practice, First Term. Calculations and Accounts. Telephone Directory. Suburban Telephone Directory. Bullinger's Post Office, Express, and Freight Guide. New York City Directory. Who's Who in America. Blue Book. Roget's Thesaurus. The World Almanac. Vertical File. Incoming Mail. Outgoing Mail. Commercial Abbreviations and General Business Terms..... 241

OFFICE PRACTICE
AND
BUSINESS PROCEDURE

OFFICE PRACTICE
AND
BUSINESS PROCEDURE

CHAPTER ONE

INTRODUCTION

As transportation systems, steam and electricity, have improved living conditions and as business has progressed from the age of the artisan, working in his home, to that of the large industrial corporations employing, oftentimes, thousands of persons who contribute to the manufacture and output of a product, so commercial activities have also increased. Improved conditions of the employee and the adoption of modern methods and appliances in the offices of large business houses have placed business upon a plane of efficiency that was undreamed of half a century ago. The introduction of labor-saving machinery and devices has not only raised the standard of intelligence among office help, but it has, to a large degree, revolutionized business methods. Every operation of an employee, whether in bookkeeping, correspondence, or at the cashier's desk, is marked by accuracy and skill. The old-fashioned method of performing every process with pen or pencil is a relic of the past, and clerks today are trained, not to be expert penmen, but to operate the many office appliances that are now in use in nearly every business office.

An advanced step in progress was made with the invention of the typewriter which has changed correspondence methods in business offices from the laborious writing by hand to the

writing machine. This change has necessitated the employment of typists and stenographers. The use of the typewriter has made possible the making of duplicate records, thus preparing the way for the adoption of the modern form of filing. No argument is needed today to convince a business man of the necessity of keeping typed copies of all correspondence.

Calculating, billing, and bookkeeping machines have changed conditions from that of the old style bookkeeper, who carried, largely in his mind, the calculations and records of the office. These modern devices enable large institutions and manufacturing concerns to handle an enormous volume of accounts. Calculating machines have lessened the physical labor of office employees. These machines always give accurate results with an incredible saving of time. They also furnish prompt and dependable information which is available at any time. They eliminate mistakes, erasures, duplications, and omissions. They give administrative and high salaried clerks more time for other important duties.

The Filing Department of a modern business systematically preserves all correspondence and copies of business records of all kinds. Today the filing department is on an equal basis with the accounting department.

Sales managers and business executives who direct selling campaigns must employ some system of checking the fields covered by members of the sales force. Total returns of sales while en route, are often used for the sake of comparison. Distances from town to town must be known so that railroad fares may be checked up. Usually railroad maps are employed on which routes of railroads connecting towns and interurban trolley systems are indicated. The towns are classified as industrial, agricultural, or suburban.

The age of the bound book in accounting is slowly giving way to that of the loose-leaf system and filing cards. The courts have passed upon the legality of the loose-leaf system, and it is now accepted as legal evidence in case of litigation.

The machine written ledger page, the posting of debit and credit items, and the computing of balances automatically, are much more simple than the old-fashioned hand-written ledger page.

Stamps may now be affixed to envelopes and the envelopes sealed by means of machines. When a company desires to mail two thousand or more identical pieces of mail a special permit may be obtained from the post office which grants permission to send the mail without affixing postage to each individual piece.

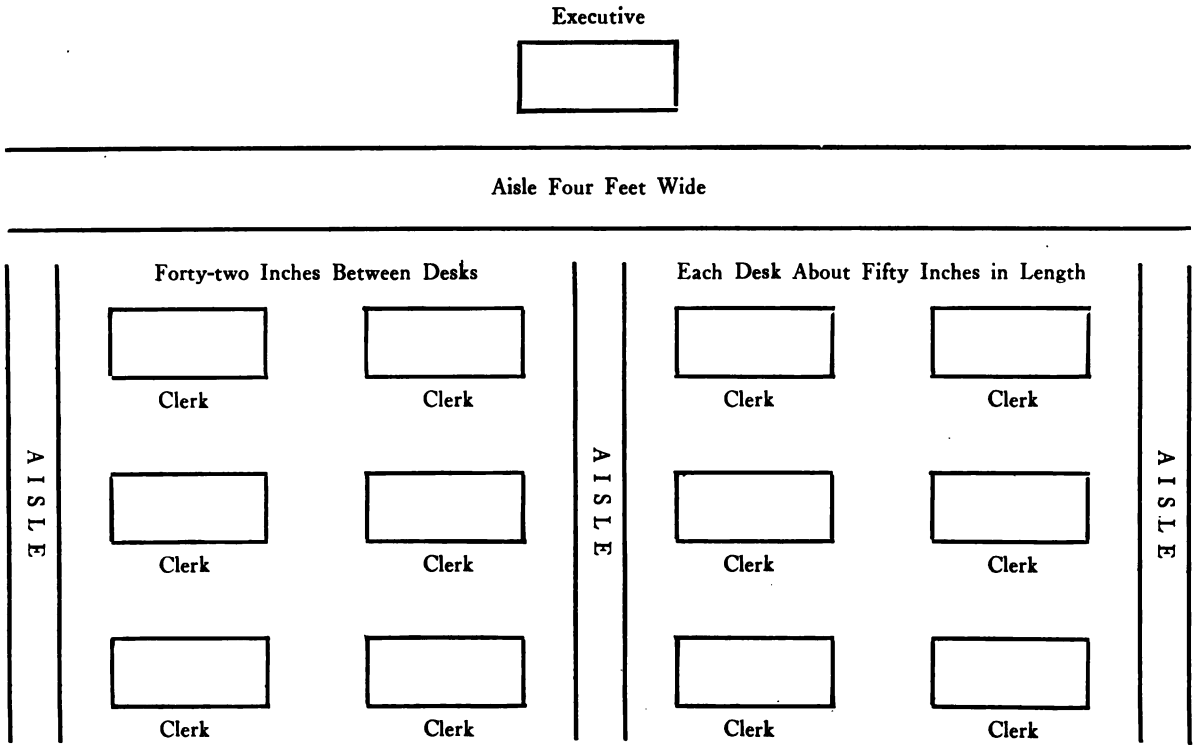
Large business concerns that send out monthly statements and other pieces of mail at first class postage rates, may have a cancelling machine similar to the one used in the post office. When employing this method they use a die which contains their permit number and an indicator which automatically records the number of pieces of mailable matter passing through the machine.

Business houses are usually divided into several principal departments, such as the administrative, sales, production, accounting, credit and purchasing, the stenographic and typing, and the filing departments.

A competent office employee is one who is an expert in his own particular type of work. He knows how to perform the duties required of him and why this should be done. Many of the large corporations maintain schools for the instruction of new employees. In some companies instructors are engaged who give new employees instructions in the routine of the office. These employees are then assigned to practical work.

Students should, however, get this sort of training in the classroom before accepting a position, and thereby become accustomed to the "business atmosphere" into which they hope to be employed.

Each member of an office practice class must be impressed with the responsibility of accuracy, honesty, and a thorough


Executive
Aisle Four Feet Wide
Forty-two Inches Between Desks
Each Desk About Fifty Inches in Length
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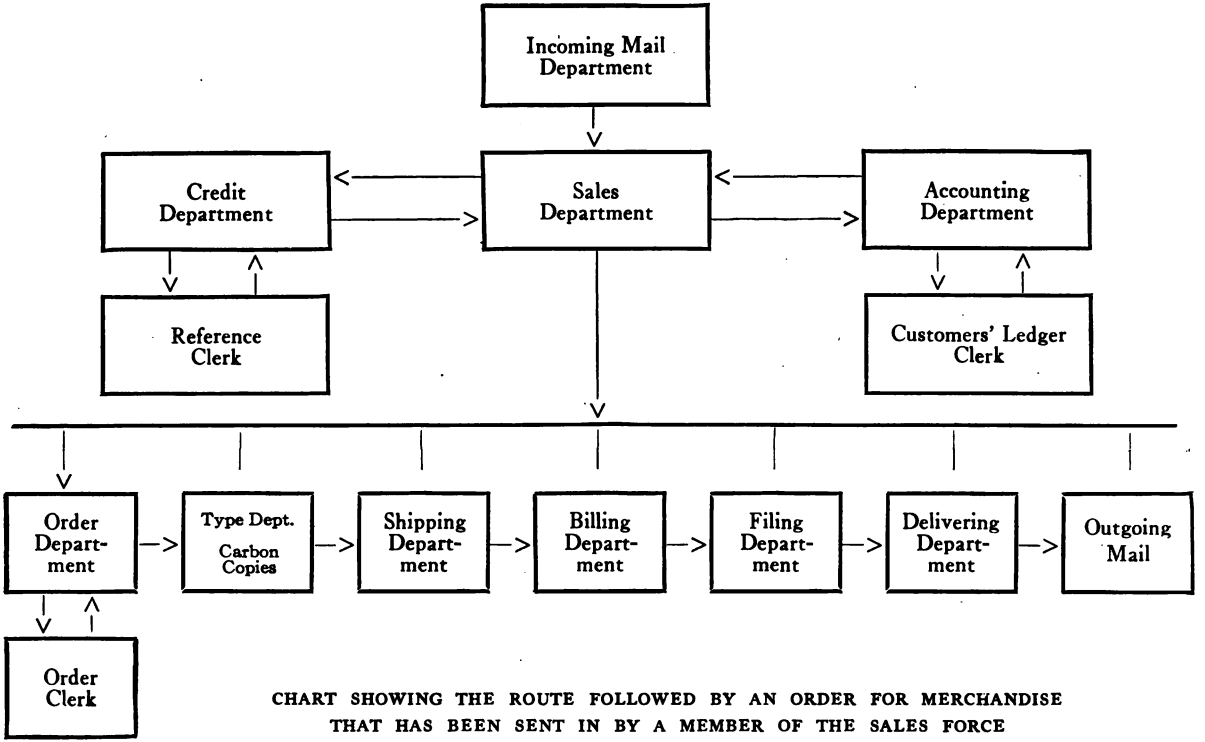


CHART SHOWING THE ROUTE FOLLOWED BY AN ORDER FOR MERCHANDISE THAT HAS BEEN SENT IN BY A MEMBER OF THE SALES FORCE

understanding of office routine. He must possess a knowledge of correct business English and of business methods, and must have a fund of general information on business subjects.

In modern offices flat top desks are generally used, and may be arranged somewhat as shown on pages 4 and 5.

This arrangement sustains the interest of the worker in his duties and allows an executive to supervise the entire office.

An executive or a clerk should keep his desk neat and orderly. Scattered papers indicate that he has not caught up with the day's work, and can give no thought to problems of tomorrow. A disorderly desk also gives an unbusiness-like impression to a prospective customer who may call for a conference.

CHAPTER TWO

Rapid Calculation and Commercial Mathematics

Every business man finds himself confronted with mathematical problems. "Figuring out the way to do it," is a business expression which means that in every move a man makes in the conduct of his business he must deal with quantities and their numerical relations. It is necessary for him to "figure correctly" in order to be successful. The reason many businesses fail is because the owners often rely upon guess work in their estimates.

The innumerable mathematical computations common to everyday business may be performed easily and accurately by the use of short methods, and the results may often be obtained without the aid of pen or pencil. Business men require clerks to be skillful in handling numerical computations that will insure rapidity and accuracy. The examples which follow are designed to test the student's skill in calculation.

Horizontal and Vertical Addition

Add *horizontally* and *vertically* the following sales. Find the total sales of each department and the total sales of all departments.

Summary of Monthly Sales

1920	Clothing	Dress Goods	Gloves	Hats	Total of all Departments
Jan.....	$16,427.65	$11,428.50	$2,148.75	$4,472.60	
Feb.....	14,962.45	9,985.65	3,542.70	5,390.60	
March....	17,857.60	8,492.90	4,679.50	4,552.90	
April.....	18,852.60	12,198.50	3,179.30	6,563.20	
Totals....					

Verify the above by finding results on the adding machine.

1921	Suits and Dresses	Silks and Velvets	Shoes	
Jan.....	$4568732.75 +	$97346.64 +	$73846.52 =	(a)
Feb.....	784938.56 +	9484.72 +	6743.82 =	(b)
March...	3742856.93 +	78342.51 +	34785.67 =	(c)
April.....	487352.71 +	7849.73 +	4976.84 =	(d)
May.....	7896431.45 +	98432.41 +	973.69 =	(e)
June.....	974829.16 +	8579.33 +	2849.73 =	(f)
July	83496.83 +	2984.28 +	784.58 =	(g)
	(h) +	(i) +	(j) =	(k)

NOTE: The sum of (h), (i), and (j) should equal the sum of (a) to (g)—the total sales, or (k).

Verify all results by adding this problem on the calculating machine.

Group Method of Vertical Addition

EXAMPLE: To illustrate the addition of two columns at once, add the units and tens (23) of the first figures to the tens or (70) of the next figure, and then add the unit figure (6) thus: 23 + 70 + 6 = 99. To this sum add 60 + 9 + 80 + 4 = Total of 252.

```
 84
 69
 76
 23
----
252
```

Using this method, add the following problems:

82	34	78	86	97	56	39
96	28	46	72	84	81	54
78	73	97	39	73	69	87
46	29	43	58	43	78	93

Prove the vertical addition by adding downward.

EXAMPLE: To illustrate the addition of three columns at once, add to 243 the hundreds figure (500) then the units and tens figures as 243+500+97=840+400+84=1324, etc.

```
437
384
297
726
484
597
243
----
3168
```

Using this method, add the following problems:

567	349	756	973	841
484	284	296	172	476
397	439	493	379	438
232	373	372	246	354
143	242	156	128	178
488	187	783	376	273
579	365	516	459	292

Following are combinations of units figures that make 10 and 20:

7	8	9	6	4	6	7	6	5	7
2	2	1	4	3	3	4	1	3	1
1	–	–	–	3	1	9	3	2	2
–				–	–	–	–	–	–
5	6	9	7	8	8	7	6	8	9
5	3	1	2	2	3	4	4	5	3
7	2	6	2	7	9	9	9	7	8
3	9	4	9	3	–	–	1	–	–
–	–	–	–	–			–		
7	8	9	7	6	8	7	6	7	7
4	4	2	4	5	3	5	6	9	7
9	8	9	9	9	9	8	8	4	6
–	–	–	–	–	–	–	–	–	–

In all cases of counting the following key numbers should be used. On these key numbers the units figure is given.

After the units figure 10 is reached, the tens figure must be added as the units figures simply are repeated. Counting by 2's from 2, the key is units figures 2, 4, 6, 8, 10, thus, in counting by 2's beginning with 2 to 100, we have:

2	12	22	32	42	52	62	72	82	92	102
4	14	24	34	44	54	64	74	84	94	104
6	16	26	36	46	56	66	76	86	96	106
8	18	28	38	48	58	68	78	88	98	108
10	20	30	40	50	60	70	80	90	100	110

Key number by 4's is 4, 8, 2, 6, 0 beginning with 4
" " " 4's is 3, 7, 1, 5, 9 " " 3
" " " 4's is 2, 6, 0, 4, 8 " " 2
" " " 4's is 1, 5, 9, 3, 7 " " 1
" " " 5's is 5, 0 beginning with 5
" " " 5's is 4, 9 " " 4
" " " 5's is 3, 8 " " 3
" " " 5's is 2, 7 " " 2
" " " 5's is 1, 6 " " 1
" " " 6's is 1, 7, 3, 9, 5 beginning with 1
" " " 6's is 2, 8, 4, 0, 6 " "—2
" " " 6's is 3, 9, 5, 1, 7 " "—3
" " " 6's is 4, 0, 6, 2, 8 " "—4
" " " 6's is 5, 1, 7. 3, 9 " "—5
" " " 6's is 6, 2, 8, 4, 0 " "—6
" " " 8's beginning with 1 is 1, 9, 7, 5, 3
" " " 8's " " 2 is 2, 0. 8, 6, 4
" " " 8's " " 3 is 3, 1, 9, 7, 5
" " " 8's " " 4 is 4, 2, 0, 8, 6
" " " 8's " " 5 is 5, 3, 1, 9. 7
" " " 8's " " 6 is 6, 4, 2, 0, 8
" " " 8's " " 7 is 7, 5, 3, 1, 9
" " " 8's " " 8 is 8, 6, 4, 2, 0

Count, beginning with 1, to the number itself in each case, and count from the beginning unit figure to 100.

To find the sum of two fractions having one for the numerator take the sum of the denominators for the numerator of the answer and the product of the denominators for the denominator of the answer, as, $1/2+1/6=8/12$.

Find the new denominator and new numerator in each case.

1/2+1/6=	1/3+1/6=	1/2+1/8=	1/4+1/3=	1/7+1/6=
1/3+1/2=	1/7+1/3=	1/8+1/2=	1/5+1/4=	1/9+1/3=
1/5+1/3=	1/2+1/7=	1/9+1/2=	1/7+1/5=	1/9+1/4=
1/3+1/8=	1/7+1/2=	1/8+1/3=	1/5+1/6=	1/9+1/5=
1/9+1/6=	1/7+1/6=	1/6+1/4=	1/9+1/7=	1/8+1/4=
1/6+1/5=	1/8+1/9=	1/8+1/5=	1/3+1/7=	1/6+1/8=
1/7+1/4=	1/8+1/7=	1/7+1/5=	1/8+1/9=	

Use 2, 3, 4, 5, 6, 7, 8, or 9 for numerators of these factors. In each case take the sum of the denominators and multiply by the numerator, as, 2/3+2/7=20/21.

The denominator of the answer will be the product of the denominators.

The *complement* of a number is the difference between the given number and 10, or some power of 10. For example, the complement of 8 is 2, the complement of 75 is 25, the complement of 850 is 150.

Find the complements of the following:

6	2	85	96	246	753
4	7	75	58	397	947
5	8	64	71	846	576
3	9	88	94	989	649

This method is used in subtraction on adding and calculating machines.

Proof of Addition

```
 4673
 2483
 4267
 5624
 ----
   17  = sum of first   column
  23   =  "  " second   "
 18    =  "  " third    "
15     =  "  " fourth   "
-----
17047
```

"Casting out 9's"

The method of casting out 9's is sometimes used as a proof of the accuracy of columnar addition. Find the sum of the digits added horizontally and divide the total by 9, or cast out the nines by grouping figures the sum of which equals nine. According to the method used by John H. Walsh in his textbook, "Business Arithmetic," we could find the "excess" of 9's in 3460875 by adding 3+4+6+8+7+5 or 33 and dividing by 9 which leaves a remainder of 6. He also recommends the method of rejecting 9 when the sum of two or more digits is 9.

$$\left.\begin{array}{l} 98753214 = 3 \\ 76543216 = 7 \\ 97591246 = 7 \\ 89765381 = 2 \\ 73954769 = 5 \end{array}\right\} 24 \div 9 = 2 \text{ nines and 6 remainder}$$

$$436607826 = 33 \div 9 = 3 \text{ nines and 6 remainder—}$$

As we have 6 as the remainder for the addends and 6 as the remainder for the answer, we have proved the problem by casting out the 9's.

Add the following and prove by casting out the 9's:

1.
```
47897684
32076483
82478978
68764376
98765432
```

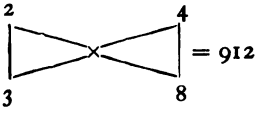
2.
```
84967854
97345632
72764531
97463172
63543781
97865387
```

3.
```
784695439
946135846
473983467
537281973
175837468
359721837
```

4. 2 3 4 5 3 2 7 1 2 4 3 6 9
7 3 1 4 9 6 2 8 2 3 1 2 4
6 7 8 1 3 9 7 2 1 4 8 1 3
6 7 3 4 2 1 8 9 3 8 1 2 6
3 2 1 4 3 2 7 5 6 8 7 7 2
4 5 2 3 2 6 4 6 5 8 1 7 6
9 2 3 1 6 8 2 3 4 5 6 8 1
2 7 6 9 4 3 7 8 7 6 2 5 6
4 1 5 2 3 6 8 3 2 7 2 1 9
1 8 7 2 9 7 6 1 9 8 3 4 5
6 1 4 2 3 6 8 9 7 6 4 1 3

Multiplication

The process of cross multiplication is applicable to all problems in multiplication and may be used in extending invoices, as the number of the articles purchased may be multiplied by their cost, either to verify the cost or to find the extensions. The following diagram may be used to illustrate the multiplication of 24 by 38 when the product is obtained without the use of pencil and paper:



1. Multiply 8×4; set down 2 and carry the 3.
2. Multiply 8×2; also 3×4; to the sum of these add the 3 which was carried. The total is 31 set down the 1 and carry the 3.
3. Multiply 3×2; add the carrying figure 3; set down the 9. The total or product is 912.

Multiply the following by cross multiplication:

a 25×46	h 42×36	o 92×24
b 24×74	i 58×43	p 74×43
c 47×56	j 83×67	q 46×58
d 68×35	k 49×26	r 93×28
e 42×37	l 28×64	s 79×42
f 83×24	m 76×32	t 64×37
g 97×53	n 26×45	u 67×43

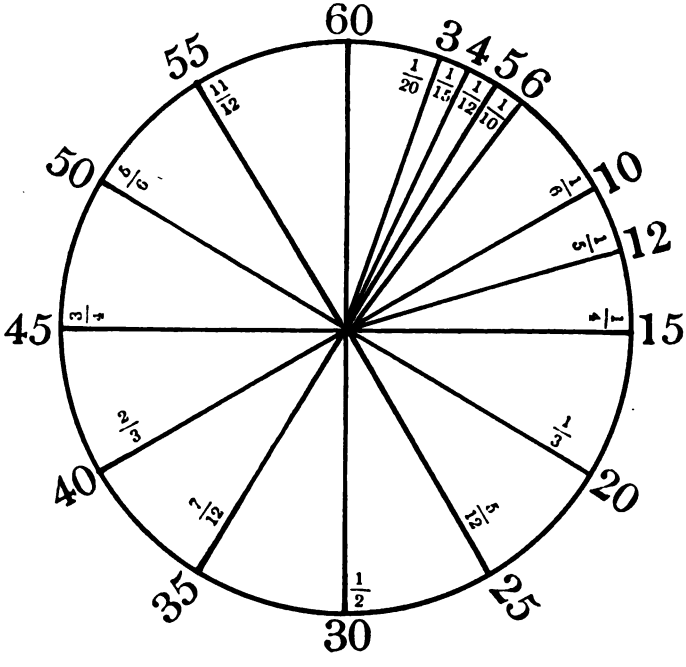
Add the following, find the difference, and multiply the result by 678.

a	2	7	8	6	1	3	7	9
	8	9	7	3	4	5	6	9
	5	3	4	6	1	4	7	2
	9	8	8	3	7	8	6	3
	7	9	7	5	3	4	5	7
	3	7	9	2	5	2	3	8

b	3	2	3	4	5	7	7	8
	4	1	2	9	7	3	4	9
	6	4	3	6	8	4	3	7
	2	3	4	5	6	8	4	2
	5	5	7	4	7	9	3	8
	2	3	2	5	9	7	2	5

Interest

In calculating interest at 6% for short periods, business men point off 1% or 2 places in the principal as the interest for 60 days. Using this method for 6 days 3 places would be



FRACTIONAL PARTS OF AN HOUR

pointed off; for 600 days, 1 place would be pointed off; while for 6000 days no places would be pointed off as the interest would equal the principal. Using the idea that 60 minutes equals one hour the fractional part of an hour would be as in diagram on page 14.

This idea may be applied to days in applying the fractional part of 60 days to the different number of days for which interest is to be paid.

To compute the interest at any other than 6% find how much more or less than 6 is the rate desired. Find the interest at 6% and then at the desired rate.

6 1/2%	is	1/2%	more	than	6%
6 3/4%	is	3/4%	"	"	"
7 1/5%	is	1 1/5%	"	"	"
7 1/2%	is	1 1/2%	"	"	"
5 1/2%	is	1/2%	less	"	"
5 1/4%	is	3/4%	"	"	"
4 4/5%	is	1 1/5%	"	"	"
4 1/2%	is	1 1/2%	"	"	"

Find the interest at 6% and then divide by the fractional rate above or below 6%. If more than 6% add the result of the division to 6%. If less than 6% subtract the result of the division from 6%.

3	days	=1/20	of	60	days	25 days	=5/12	of 60	days
4	"	=1/15	"	"	"	30 "	=1/2	" "	"
5	"	=1/12	"	"	"	35 "	=7/12	" "	"
6	"	=1/10	"	"	"	40 "	=2/3	" "	"
10	"	=1/6	"	"	"	45 "	=3/4	" "	"
12	"	=1/5	"	"	"	50 "	=5/6	" "	"
15	"	=1/4	"	"	"	55 "	=11/12	" "	"
20	"	=1/3	"	"	"				

The following problems are taken from Walsh's *Business Arithmetic:*

Find the interest on $583.20 at 6% for 90 days, for 80 days, for 75 days, for 72 days:

60 days interest on $583.20	=	$5.832	decimal point moved in the principal 2 places to the left
+30days 1/2 interest for 60 days	=	2.916	
90 days=the sum of 60+30=90 days		8.748	
60 days interest on $583.20	=	$5.832	
+20 days 1/3 of 60 days	=	1.944	
80 days=the sum of 60+20=80 days		7.776	interest on $583.20 for 80 days at 6%
60 days interest on $583.20	=	$5.832	
+15 days 1/4 of 60 days	=	1.458	
75 days=the sum of 60+15=75 days		7.290	interest on $583.20 for 75 days at 6%
60 days interest on $583.20	=	$5.832	
+12 days 1/5 of 60 days	=	1.166	
72 days=the sum of 60+12=72 days		6.998	interest on $583.20 for 72 days at 6%

To find the interest at 6% for any given number of days divide the number of days into aliquot parts of sixty, as:

60 days	60 days	60 days	60 days	60 days
30 days	20 days	15 days	12 days	6 days
5 days	4 days	3 days	2 days	1 day
95 days	84 days	78 days	74 days	67 days

Find the interest on $394.75 at 6% for 86 days.

60 days interest	=	$3.9475	– Point off 2 places or
20 days=1/3 of 60 days	=	1.3158	– move the decimal point
6 days=1/10 of 60 days	=	.39475	– in the principal two
			– places to the left.
		5.65805	–

or point off 3 places in the principal or move the decimal point 3 places to the left for 6 days.

To find the interest on $834.36 at 6% for days less than 60, 48 days, 50 days, 54, days, 55 days, 59 days.

The only difference in the method is that to find the interest by the 60 day method for days less than 60 we find the interest for 60 days and for the aliquot part of 60 days, but deduct the interest from that of 60 days.

60 days	60 days	60 days	60 days	60 days
−15 days	−12 days	−10 days	− 6 days	− 5 days
45 days	48 days	50 days	54 days	55 days
		60 days		
		− 1 day		
		59 days		

Find the interest on the following, using the 60 day method:

1.	$6853	for 60 days
2.	4934.50	for 6 days
3.	5421	for 1800 days

Note: For 6000 days *no* places pointed off. 1800 days is what part of 6000 days?

4.	$6348	for 6000 days
5.	3256	for 1200 days
6.	1264.60	for 90 days
7.	4211	for 72 days
8.	1342	for 600 days
9.	2330	for 900 days
10.	1570	for 1500 days
11.	2427	for 200 days
12.	5925	for 60 days
13.	6380.75	for 6 days
14.	449	for 1200 days
15.	4328	for 6000 days
16.	1137.70	for 80 days
17.	7421	for 72 days
18.	4620	for 1800 days
19.	593	for 2400 days
20.	8972	for 60 days
21.	7372.45	for 6 days
22.	4621	for 1800 days
23.	1200	for 6 days
24.	450	for 60 days
25.	1500	for 600 days

26.	6000	for 91 days
27.	12000	for 64 days
28.	830	for 1 year, 7 months, 30 days
29.	1500	for 2 years, 6 months
30.	1200	for 2 months
31.	1628	for 10 months
32.	1560.75	for 1 year, 3 months, 5 days
33.	1590	for 1800 days
34.	2135	for 2 years, 6 months
35.	600	for 30 days
36.	60	for 26 days
37.	4200	for 66 days
38.	4510	for 6 days
39.	989	for 180 days
40.	60	for 89 days
41.	89	for 60 days
42.	12000	for 45 days
43.	1800	for 75 days
44.	24	for 85 days
45.	85	for 24 days
46.	3000	for 75 days
47.	75	for 3000 days
48.	750	for 1 year
49.	5700	for 1 year, 7 months, 20 days
50.	1540	for 2 years, 5 months, 15 days

Work the above problems out at 6 1/2%, 6 3/4%, 7%, 7 1/2%, 8%, 5%, 5 1/2%, 5 1/4%, 4%, 4 1/2%.

Note: Interest at 6% on $8972 for 6 days = $8.972—3 places
" " " " " " 60 " = 89.72—2 places
" " " " " " 600 " = 897.20—1 place
" " " " " " 6000 " = 8972.00—no places

CHAPTER THREE

Correlation of Mercantile Accounts with Office Practice

Accounts have existed since prehistoric man drew a square on the sand near the seashore and placed a small pebble in each corner and one in the center of the square, making it possible for him to trade with his fellowman and to record the business transactions in units of five. The Chinese could trade in ten units, as they used the abacus, by moving the colored beads which were strung on wires and were in units of ten. This method of notation is still used in parts of China, Japan, and Russia. The Babylonians recorded their business transactions on sun-baked tablets, making some of these as small as one inch by three inches. The Metropolitan Museum of Art, New York City, has on exhibition several of these tablets on which records of partnership, contracts, receipts, drafts, promissory notes, sales, inventories, and checks are recorded.

The Egyptians used papyrus for their accounting records, and had a system of classification. The Ancient Greeks required all their public officials to keep accounts of their stewardship while in public office, and upon leaving office they were required to render an account of all funds intrusted to their care while in their official position.

The Romans kept records of all receipts and payments of cash while the wealthy Romans generally paid by checks.

The early English kept a system of records which related to the levying and collecting of taxes from all taxable estates.

The French compiled lists of all debtors and creditors similar to customers' and creditors' ledger accounts today.

The idea of money columns developed about the year 1300. Roman numerals were used in keeping accounts, as courts demanded books made out in the Roman notation. The Roman numerals were discarded and the Arabic were substituted in bookkeeping records about the year 1700. Until quite recently loose-leaf books were not allowed as court evidence until a decision was handed down making loose-leaf books acceptable as legal evidence.

The Italians were the first nation to introduce a system of double entry in keeping accounts in business transactions. They used this system as early as 1340.

The Italian idea of account keeping was adopted by the English and later by our country. The idea of double form or the left hand side of an account being used for all debit entries and the right hand for all credit entries has therefore come down to us from the Italians, through England, by way of Holland. Some English texts show the liabilities of the balance sheet recorded on the left side of the page, and the assets on the right side, while we now record the assets on the left, and the liabilities on the right side of the balance sheet.

The first accounts were records of cash receipts and payments. Later, when records were kept of the exchange of goods, that is of merchandise purchased and sold for cash and on account, more elaborate systems developed and the journal was added as an extra book. In the old method of accounting, the student entered all transactions in a blotter or day book. These accounts were then entered in the journal and were later transferred to a book called the ledger, in which all transactions of a similar nature were summarized under one heading as "Merchandise."

Then another method came into use and the transactions were entered in the ledger accounts directly rather than in the journal. By this method the student concentrated his attention upon the increases and decreases of the assets and liabilities of the business, and then realized the result of his work.

By reference to the cash account in the text the student may see that the increases of the asset, cash, are under "cash receipts," while the decreases are noted under "cash paid out" by the business, the difference between them being the *balance* of cash on hand. Every transaction involves a transfer of either money, or an equivalent of money, from one person to another. If cash is given for goods, an exchange of values results and the cash account or record will show a decrease of cash, while the goods account will show an increase in the value of goods. Now this idea of increase or decrease of debit and of an asset, expresses the necessity of the idea of debit for increases of assets and credits for decreases of assets. For every debit, then, there must be a credit, as an exchange involves at least two accounts, and the sum of all the debits must equal the sum of all the credits. By using the method of the equation by which the debits and the credits are obtained which lead to the *trial balance*, and by separating what the business owns, called assets, from what the business owes to others (liabilities); and by subtracting the liabilities from the assets, we find the *capital, proprietorship*, or the *present worth* of the owner of the business. Thus, all the items required for the *balance sheet* become known. The business man is always interested in the balance sheet because it shows him his capital, his assets, and his liabilities. What he is worth, his capital, is found by subtracting his liabilities from his assets. Stated as an equation, Assets − liabilities = capital; or better still: Assets = Liabilities + capital.

The *statement* of the business which shows a list of the proprietor's assets and liabilities or what he owns, and what he owes to others, is known as the *Balance Sheet.*

Balance Sheet (*see page 33*)

Assets	Liabilities + Proprietorship

February 1, 1921, F. E. McGill started business with a cash investment of $5000.

ASSSETS = PROPRIETORSHIP

Assets	equals	*Proprietorship*
Cash $5000		$5000

February 2, 1921, F. E. McGill bought on account merchandise for $1500 from Harris & Company; a typewriter for $100 from the Underwood Typewriter Company, and office furniture from the Library Bureau for $400.

ASSETS	—	LIABILITIES	=	PROPRIETORSHIP
Cash	5000			
Merchandise	1500	Harris & Company	1500	
Typewriter	100	Underwood Typewriter Company	100	
Furniture	400	Library Bureau	400	
	7000		2000	5000

Working this problem as an ordinary problem in arithmetic gives the following:

Assets	7000
Liabilities	2000
Difference or Proprietorship	5000

or better still:

Assets		*Liabilities*		
Cash	5000	Harris & Company	1500	
Merchandise	1500	Underwood Typewriter Company	100	
Typewriter	100	Library Bureau	400	
Furniture	400			
Total Assets	7000	Total Liability	2000	
		Capital	5000	
		F. E. McGill	7000	Total liability and capital

The financial facts involved in the above problem may be graphically stated as follows:

Debits		Credits	
Assets		*Liabilities & Capital*	
Cash	5000	Harris & Co	1500
Merchandise	1500	Underwood Typewriter Company	100
Typewriter	100	Library Bureau	400
Furniture	400		
		Total Liabilities	2000
		Capital	
		F. E. McGill	5000
	7000	Total Liabilities & Capital	7000
Total Assets			

In the above diagram, for convenience, it has been decided to call the items on the left side, debits or assets, and those on the right, credits or liabilities and capital. It is, therefore, well to bear in mind that assets are debits and are recorded on the left side of their respective accounts; that liabilities and capital are credits and are recorded on the right side of their accounts. With the above scheme as a working formula, the recording of transactions will be found to be a simple matter.

How are the above items represented in the ledger or the book of accounts? To illustrate the Cash Account first, assume that F. E. McGill finds a $100 bill on Feb. 15, 1921; loses $10 on Feb. 17; receives a gift of $500 from her uncle; donates to charity $100. How much cash has she on Feb. 17, and what has happened to her capital or worth?

On February 2, 1921, the ledger accounts are shown as follows:

Dr. (Increases)	*Cash*	(Decreases) Cr.
	5000	

F. E. McGill

Dr.	Proprietor	Cr.
		5000

Dr.	Merchandise Stock	Cr.
1500		

Dr.	Typewriter	Cr.
100		

Dr.	Furniture	Cr.
400		

Dr.	Harris & Co.	Cr.
	1500	

Dr.	Library Bureau	Cr.
		400

Dr.	Underwood Typewriter Company	Cr.
		100

In the above records or accounts (groups of value of the same kind under their respective headings) the assets are shown recorded on the left or debit side of their accounts, while the capital or worth of F. E. McGill, and the liabilities are

recorded on the right or credit side of their respective accounts. After February 2, 1921, owing to the increases and decreases of *cash* or the *asset cash*, there will be indicated in the cash account the several increases and decreases mentioned; and since these increases and decreases affect the worth or capital of F. E. McGill, these increases and decreases must be shown correspondingly in the capital account also: On February 17, 1921, the Cash and Capital accounts show the following; the other accounts remaining the same.

Dr. (Increase)		Cash		(Decrease) Cr.
Feb. 2	5000		Feb. 17 Lost	10
15 Found	100		Donated	100
17 Gift	500			

F. E. McGILL

Dr.		Capital		Cr.
Feb. 17 Lost	10		Feb. 2	5000
17 Donated	100		15 Found	100
			17 Gift	500

In the cash account, the asset cash increased from $5000 on February 2 to $5600 on February 17, but it also decreased by the sum of 110; thus leaving a balance of $5490. When the cash account recorded an increase of $100 on the debit side, additions being shown on but one side of an account and subtractions on the opposite side, the capital account which shows the worth of F. E. McGill then increased to $5100. To show $100 as an addition to F. E. McGill's capital, increase had to

be made on the credit side of the capital account. Since the decreases of cash had to be indicated on the right or credit side of the cash account so the decreases of the capital or worth of F. E. McGill had to be indicated on the left or debit side of the capital account. Thus, in graphic form, the practice of recording increases and decreases of assets and capital and liabilities, too, as these are credit accounts also, may be indicated as follows:

Dr. Assets Cr.	
Increases	Decreases

Dr. Capital Cr.	
Decreases	Increases

In conclusion, then, it is well to remember that assets, when increased, show these increases on the debit or left side of their accounts; and when decreased, show these decreases on the credit or right side of their accounts, this arrangement is necessary for convenience and system. The capital account and the liability accounts, being credits, necessarily show increase on the credit side and decrease on the debit side of their respective accounts.

The question always is: Has the transaction or event involving values increased or decreased the capital of the proprietor? Increased or decreased any asset or liability?

F. E. McGill bought merchandise for cash, $500.

The merchandise or purchase and the cash accounts are both asset accounts. The merchandise or purchase account shows an increase of $500 in the value of the asset purchases, and the

cash account records a corresponding decrease of $500, as the asset cash was decreased. In this case the capital has not been affected; two assets of equal value were simply exchanged.

Dr. Purchases	Cr.
Purchases or Increases 500 Asset is increased	

Dr. Cash	Cr.
Receipts or Increases	Payments or Decreases 500 Asset is decreased

F. E. McGill bought $200 merchandise on account from Vincent & Company. This purchase on account increases the asset account merchandise or purchases and increases the liabilities. To indicate to whom money is due for an asset increased, a personal account is added under the heading of Vincent & Company, to whom McGill owes the $200. Debit purchases because the purchases asset has increased. Debit purchases because $200 worth of merchandise was received or bought, thus increasing the assets by the amount of the purchase. Credit the personal account, Vincent & Company, because the liabilities are increased $200; that is, Vincent & Company have a claim against F. E. McGill for $200.

Purchases	
200 Asset is increased	

Vincent & Company

	200
	Liability is increased

Assume that a check for $100 is sent to Vincent & Company, to apply on their account. What effect has this transaction upon the condition of F. E. McGill's worth? Has she lost or gained any money? No. But has she decreased her cash and by so doing also decreased her indebtedness? Yes. In this instance, then, the asset cash shows a decrease on the right or credit side of the cash account and the liability account called Vincent & Company; to distinguish it from other liability accounts, is correspondingly decreased by an entry on the debit side of the Vincent & Company account. Thus far, then, it is clear that for convenience and system it is best to debit assets for increases of those assets; to credit assets for decreases of those assets; to credit capital and liabilities for increases of those items; and to debit them for decreases of the liabilities and capital.

Financial Statements

What do you own that helps you and is of value to you in school? The following is a list and the value of each item:

Pencil box	.15	
Pencils	.10	Do you owe for them?
Ruler	.05	(no)
Total Assets	.30	

Then what are you worth?

You may call it your total assets.

Since you owe nothing, your *assets* equal your *capital.*

Business men want information of all the property available for use in the business. Things named in this list are the

assets of the business, such as counters, shelves, cash registers, adding machines, stock of goods, stationery, etc.

In large business houses, the owner does not personally own all the property needed to carry on the business; therefore he must borrow from others what he needs, either money or stock of goods bought but not yet paid for. Thus he becomes indebted to others. He is *liable* to be called upon to pay these people who now have a claim upon the assets of the business.

All papers used in business must be labeled and dated as in the following:

Information Statement or Financial Statement

JAMES BROWN

January 31, 1921

Assets			*Liabilities and Capital*		
Cash	900		Owed to Jones	318	
Stock	125		Owed on Written Promise	75	
Total Assets		1025	Total Liabilities		393
			James Brown, Ownership		632
		1025			1025

Every business is conducted for the purpose of increasing ownership. The proprietor, therefore, desires information that will help him to increase his capital, and that will assist him in making plans for the future management of his business. The *information statement* will not only help the manager himself, but may be shown to persons from whom it is desired to borrow money or to buy goods on account.

Since any going concern is a living organization, that is buying and selling continually, the information about assets, liabilities, and capital will be true only at the time the report is made, because the assets are always either increasing or decreasing and the liabilities, likewise; therefore, the capital is always changing.

James Brown on February 28, 1921, calls for information about his business. He receives the following statement or report:

JAMES BROWN

February 28, 1921

Assets			*Liabilities and Capital*		
Cash	825		Owed to the Corn Exchange Bank	1595	
Due from Grant & Co	425		Owed to the White Company	3400	
Stock	4625		Total Liabilities		4995
Horses and Wagons	850		James Brown, Capital		1730
Total Assets		6725			
		6725			6725

What would you do with the two sheets of information if you were James Brown? You would compare the capital January 31, which was $632, with the capital, February 28, $1730, in order to note the increase in capital or gain.

No business man is satisfied to know merely that he gained or that he lost. He wishes to know the *source* or *cause* of his gain or loss so that he may know how to improve his business and make it progress more rapidly.

Goods are bought to be sold again at a higher price. This brings in the two elements of *cost* and *selling price*, which must be considered in order to determine the loss or the gain in the business, thus:

Selling price of goods	850
Cost of goods	725
Gain	125

Every business must incur some expenses which decrease the gross gain. Suppose the expenses in this problem were $35, then the net gain would be only $90.

The owner can now compare this report with the report of the previous month, and see at a glance whether his sales have increased or decreased, whether the cost of the goods has increased or decreased, and thus know the present growth or lack of growth of the business. This information enables him to correct any faults in his business force or methods.

The business usually has unsold goods on hand. Therefore, it must have some method of deciding the cost of the goods that have been sold. In a new business if a dealer buys $8000 worth of merchandise and has, at the end of the period, $2000 worth left, he assumes that he has parted with merchandise that cost him $6000. This transaction is shown thus:

Purchases	8000
Less Inventory (Stock at end)	2000
Cost of what was Sold	6000

Assume that the business continues; then he has $2000 worth of stock on hand. In addition, he purchases $3500 more of stock. He now has what he started with, stock (called inventory), $2000, plus $3500 purchases, or $5500 merchandise available for sale. At the end of the month he takes account of stock or inventory and finds that the stock is valued at $1300. He must have parted with what cost him $4200, shown thus:

Merchandise, Inventory May 1,	2000
Bought during month	3500
Available for Sale during month	5500
Less Merchandise Inventory (on hand May 31)	1300
Cost of Merchandise Sold	4200

The business man wishes all the information about the causes of the gains or the losses during the month or longer in a concise form, thus:

Cash

Balance	240		

Notes Receivable

Balance	4600		

Merchandise Inventory

Stock	6500		

Notes Payable

		Balance	2300

Accounts Payable

John Smith			L. Lane		
	Balance	900		Balance	700

James Jones, Proprietor

		Capital	7400

Assignment:

Set up the balance of the ledger accounts from which the following balance sheet was made:

Balance Sheet

JAMES RYAN

September 30, 1921

Assets			*Liabilities and Capital*		
Cash	9400		Notes Payable	2500	
Machinery and Tools	1200		Accounts Payable	1800	
Delivery Equipment	900		Mortgage Payable	850	
Merchandise Inventory	1500		Total Liabilities		5150
Accounts Receivable	950		James Ryan, Capital		11300
Real Estate	2500				
Total Assets		16450			
		16450			16450

The McGill Company buys and sells in various ways, for cash, on account, and on written promise, such as *notes*, *trade acceptances*, and *drafts*.

If the company buys for *cash* and either gives cash from the cash drawer or gives the personal check of the company, it parts with cash; therefore, the amount of cash given or parted with, is entered on the *credit* side of the cash account by the bookkeeper, or may be entered on the credit side of the cash book.

If goods are sold for cash and cash or a personal check is received the amount of this cash received is entered on the *debit* side of the cash account or cash book to indicate an increase of the asset cash.

To find the difference between the receipts and payments of cash, or increases or decreases of cash, find the total receipts and the total payments of cash and subtract, calling the result of this process the balance, or cash on hand.

As the books of this company are kept by the double entry system an entry of equal value must be made in at least two

accounts for every business transaction. For every entry on the debit side of the books there must be an entry of equal value on the credit side to keep a balance which will be a check on the bookkeeper.

As the following transaction is for merchandise, the amount, $275, must be entered as a cash purchase on the debit side of the Purchase account, because the asset goods or purchases was increased. Only goods bought to be sold by a business, is called merchandise, and is recorded in the purchases account. When merchandise is sold at cost price for cash, the amount of the sale must be entered on the credit side of the purchases account to indicate a decrease in the value of the asset purchases. The difference will show the balance of goods on hand. The amount of cash received is entered on the receipt or increase side of the cash account while the cash paid out is entered on the payment side, or decrease side. But if the goods sold were sold at a price different from the cost price, then the entry must be made on the credit side of the sales account to indicate a decrease of the asset purchases at a greater or less price than cost.

The McGill Company are wholesale dealers in flour, grain, and groceries; thus flour, grain, and groceries must always be considered merchandise by them.

Transaction

Cash

On Hand	9000	For Purchases	2000
For Sale (see sales a/c below)	950	Decrease of cash for goods bought. (see purchase a/c below)	

Purchases

Cash Purchase	2000		
Increase of asset purchase in exchange for decrease of asset cash (see cash a/c above)			

Sales

	For Cash 950
	Decrease of the purchases asset at a price different from cost. The capital of the owner of the business will be affected by this event. (see cash a/c above)

If the decrease of the purchases asset at a price different from cost were indicated on the credit side of the purchase account, it would be difficult to ascertain the balance of goods on hand after the sale. It is therefore customary to set up a branch of the purchases account, called the sales account.

The McGill Company bought for cash from George H. Silverman, Boise, Idaho, the following:

25 bbl. flour	200.00	
50 bu. grain	75.00	
		275.00

Sold for cash to different customers the following:

15 bbl. flour	150.00	
8 bu. grain	15.00	
		165.00

Enter the transaction in the cash account and in the merchandise account, as represented by the purchases account and the sales account.

Cash Account

Receipts	Payments
165.00	275.00

and in our

Purchase Account

Purchases 275.00	

Sales

	Sales	165

This was a merchandise purchase for cash and a merchandise sale for cash.

If the McGill Company buys merchandise on account it becomes indebted to the firms from whom it buys and must show on the books the names of the firms to whom it is indebted. This is done by opening an account with the individual from whom the company bought and the amount of the purchase or merchandise which was bought on account is so entered. When goods are bought on account merchandise is received, and the amount is entered on the debit side of the purchases account.

As the books are kept by the double entry system, another account is opened, called a personal account, which shows to whom money is owed or from whom merchandise was bought on account.

When the bill is received and is either paid in cash or by check of the McGill Company, the amount is entered on the credit side of the cash account or cash book and the same is also entered on the debit side of the account, made out in the name of the firm to whom the McGill Company was indebted, and shows that the indebtedness with that firm is canceled or decreased by payment of cash. They acknowledge the amount of cash received by sending a receipt.

First Transaction:

The McGill Company bought on account, or had charged, the following:

From Charles B. Vincent & Company, Baltimore, Maryland

20 bbl. G. Sugar	100.00	
30 bbl. Searchlight Flour	150.00	
		250.00

Second Transaction:

The Company's check for $250 is sent to Charles B. Vincent & Company in full of account. Both transactions are entered in the ledger as follows:

Charles B. Vincent & Company

Indebtedness with them is canceled (Liability decreased)	McGill Company is indebted to the above firm (Liability increased)
250.00	250.00

Purchases Account

Purchases (Asset increased)	
250.00	

Cash Account

Receipts or Increases	Payments or decreases
	250.00

Sometimes, when a firm buys or sells on account, security is required. This may either be bonds, notes, or a trade acceptance. If merchandise is purchased from a firm and a note of the McGill Company is given as security that the drawer will pay the amount later, this transaction must be entered in two accounts, the notes payable account as a liability, and the purchase account as an asset.

When the amount which is stated on the face of the note is paid, this amount must be entered in the notes payable account to record a decrease of liability and also in the cash account to indicate a decrease of the asset. When a note is given to a firm that note must be paid on the date of maturity.

At the date of maturity, or sooner, the face of the note is paid and is entered on the debit side of the notes payable account because the indebtedness has been decreased and the note has been returned to the drawer. The payment of cash is entered on the credit side of the cash account.

Transaction:

The McGill Company bought merchandise from James Robertson & Company, and gave the company's note for $5000, dated January 31.

The above firm sent a check to James Robertson & Company in payment of their note of January 31.

Entries follow in their respective accounts in the ledger.

Notes Payable Account

Paid indebtedness, therefore liability was decreased.	Gave promissory note to James Robertson & Company. McGill is indebted to them, hence a liability arises
5000.00	5000.00

Purchases Account

Purchases 5000.00	

Cash Account

Receipts	Payments 5000.00

Just the opposite occurs when goods are sold on account and a note is given by someone else as security for merchandise sold to them.

The amount of the sale is entered on the credit side of the

sales account and the amount of the face of the note on the debit side of the notes receivable account. Merchandise is parted with and a note is received which will be paid at the date of maturity by the person who gave it.

When the person who owes money pays his note the transaction is entered on the credit side of the notes receivable account, representing a decrease of an asset and also on the debit side of the cash account, representing a corresponding increase of another asset in exchange for the asset decreased.

Transaction:

The McGill Company sold merchandise to the MacDonald & Rich Company for $450, receiving their 60-day note dated March 5.

MacDonald & Rich sent a letter inclosing a check in payment of their note of March 5. The correct entries in the ledger follow:

Notes Receivable Account

Their promissory note was received; asset increased	They canceled or decreased their indebtedness and the canceled note was returned to them. Thus, this asset disappears in exchange for cash asset.
450.00	450.00

Sales Account

	Sales
	450.00

Cash Account

Receipts	Payments
450.00	

The bookkeeper gets his information that he uses in the loss and gain statement from the accounts in the ledger and from other sources, as may be noted in the following:

H. Harris

Loss and Gain Statement

For the month ended November 30, 1921

	Sales			9250	
	Merchandise stock, November 1	3650			
	Purchases	8350			
	Goods for Sale	12000			
	Deduct Merchandise Inventory, November 30	5000			
	Cost of Goods Sold			7000	
	Gross Gain on Trading			2250	
	Subtract Expenses				
	Salaries	460			
	Rent	75			
	Advertising	200			
	Telephone	4			
	Total Expenses			739	
	Net Gain			1511	

The following accounts supplied the necessary information to the bookkeeper for making the *loss* and *gain* statement.

Sales

	9250

Merchandise Inventory

Nov. 1 stock	3650		
Nov. 30 stock	5000		

Purchases

8350	

Expense

Salaries	460	
Rent	75	
Advertising	200	
Telephone	4	

Expense

Not only are goods bought and sold, but services of others, too, may be bought and sold. When a service is bought, it is an asset while it is still owned. When it no longer exists it represents a decrease of the worth of the proprietor, or is a loss to him. Examples of temporary assets, or assets in the form of services which soon are used up and become non-existent and therefore losses or decreases from capital, are General Expense, Advertising, Interest, Salaries, Repairs, Rent, and other like items.

F. E. McGill buys postage stamps for cash, 15 cents. What does she buy? The service of the U. S. Government mails. In this case debit the expense account to represent an increase in the asset expense and credit the cash account to indicate a decrease in the asset cash in exchange for the service asset called expense.

F. E. McGill paid cash $10 to Henry Brown for the use of his money for 60 days. Debit interest cost or paid account, to represent the purchase by F. E. McGill of the services of Henry Brown's money and credit the cash account to indicate a decrease of cash. But as the service of Mr. Brown's money exists only for a limited time, it disappears as an asset; and as nothing is received in return for this asset which disappears, a loss or decrease from capital results.

F. E. McGill allows Chas. Daley the service of her money for 60 days and receives cash, $25 for that service. Debit cash and credit interest earned account to indicate a sale of services for a limited time. The cash increase in this case affects the capital of F. E. McGill as an increase or gain.

Expense

Postage	15	When service is used up, the capital account is debited and the expense account is credited.
(Purchase of Services)		

Interest Cost (Paid)

Purchase of Services	10	Same as the expense account	

Interest Earned

When F. E. McGill receives her money from H. Brown she receives more than she loaned to him. Her capital is thereby increased		Sale of Service	25

Business Transactions

For practice these transactions may be worked out on loose sheets of ledger paper before entering them in the general ledger, as no erasures are allowed by the United States Courts in the official books of a concern. After the transactions are worked out, a trial balance will prove that the ledger is in balance. (Supplementary exercises in Accounts, Balance Sheet, Trial Balance, and Profit and Loss Statement may be found in Chapter Ten of this text.)

Open a Cash account for the following transactions:

Nov. 1 Received $529 for membership dues in the general organization of our school.
Nov. 2 Paid for printing tickets for membership cards, $3.25.
Nov. 3 Received $35.99 for membership in the tennis club.
Nov. 4 Paid for tennis rackets, $9.75.
Nov. 5 Paid carfare for the visiting basket ball team, $15.75.
Nov. 6 Paid for tickets to the theatre as reward to victorious team, $18.50.
Nov. 7 Paid for luncheon served to the visiting basket ball team, $10.50.
Nov. 8 Received $39.45 from admission tickets for the basket ball game.
Nov. 19 Paid $5 to the basket ball coach.
Nov. 20 Received $10.25 as admission receipts to the school tennis match with the Adelphia tennis team.
Nov. 21 Paid $2.50 carfare of the visiting tennis team.

Open all necessary accounts:

Dec. 1 James Fischer began business with a cash investment of $2000.
Dec. 2 He paid rent for his store, $50.
Dec. 3 Bought of Batterson & Company for cash, merchandise amounting to $850.
Dec. 4 Sold to Anderson & Scott, on account, merchandise for $365.
Dec. 5 Sold to Somers, on account, merchandise valued at $256.
Dec. 6 Sold merchandise to Harris for cash, $357.
Dec. 7 Received from Anderson a check for $125, to apply on the account of Anderson & Scott.
Dec. 8 Purchased $243 worth of merchandise from James Ferris and sent him the company's check in full of account.
Dec. 9 Bought merchandise from George Givens valued at $245.75 and inclosed a check for half of the amount due. He asked Givens to allow the balance to remain on account.

Sep. 1 Henry Jones began the flour and grain business at 521 Main Street, investing $6000.
Sep. 2 He paid rent for the store at 521 Main Street, $100.
Sep. 3 Paid $15 for stamps and stationery.
Sep. 4 Bought from James Walters, 100 bbl. flour, $975.
Sep. 5 Sold to Henry Weiss 400 bbl. flour, $400.
Sep. 6 Sold on account, terms 10/5, 5/10, n/30, to H. Jackson & Co. flour, $395.
Sep. 8 Bought from Livingston Bros. 60 bbl. flour and 100 bu. grain, $600.
Sep. 9 Paid salaries, $55.
Sep. 10 H. Jackson & Co. paid on account, $270.
Sep. 11 Sold H. Smith on his note, merchandise, $350.
Sep. 12 Paid on account, to Livingston Bros, $500.
Sep. 13 Bought of H. Claflin on note, 60 bbl. salt, $250.
Sep. 14 H. Smith paid his note of Sep. 11, face, $350.
Sep. 15 Paid note in favor of H. Claflin, face, $250.

Oct. 1 John Whittier began business with a cash investment of $5000.
Oct. 2 Paid rent of store, $100.

Oct. 3 Bought furniture for office use, $100.

Oct. 4 Bought apples for $200, and gave the company's check for the amount.

Oct. 4 Bought on account from James Kingsley, potatoes for $100.

Oct. 5 Sold apples for cash to W. Mason, $225. (The name of the customer is not necessary when the transaction is a cash sale. When one pays cash for an article in a store the salesman never asks the name of the purchaser; on the other hand if one buys an article and says to the salesman, "Charge it," or "Charge it to my account," the salesman must know the name of the person to whom the articles are to be "charged," because he must make a report of that sale to the bookkeeper, as he must send a bill for the amount charged at the first of next month.)

Oct. 6 Bought on account, terms 10/5, 5/10, n/30, from B. H. Barron, flour for $50.

Oct. 8 Sold to Samuel Norris on account, terms 5/10, n/30, potatoes for $110.

Oct. 9 Sold to C. S. Carsley, flour for $65. He sent his check for the amount.

Oct. 10 Paid on account to Kingsley, $75.

Oct. 11 Received cash on account from Samuel Norris, $45 and his check for $55.

Oct. 12 Paid on account to B. H. Barron, $45.

Oct. 14 Received on account from C. S. Carsley, $50.

Oct. 15 Bought on account for our note from James Wender, merchandise for $500.

Oct. 16 Sold on account to F. Carter for his note, merchandise for $400.

May 1 A student (as Proprietor) begins the wholesale dry goods business, investing cash, $6578.

May 2 Paid for stationery, cash, $25.

May 3 Bought merchandise of H. M. Thamer, on account, $785.

May 4 Sold merchandise to T. S. Morris on his note for $350.

May 5 Sold merchandise to H. F. Lang on account, $225.

May 6 Sold merchandise to H. W. Wilson on his 30-day note, $50.75.

May 7 Bought merchandise of H. H. Harris on our note for $500.

May 8 Sold merchandise to H. T. Hamill and received his check for $250.
May 9 Paid express charges on merchandise, $5.50.
May 10 Paid rent of store, $100.

Sep. 1 John Harrison commenced the flour and grain business at 2160 Broadway, investing cash, $3500.
Sep. 2 Paid rent of store $75, and $25 for stationery and stamps.
Sep. 3 Bought merchandise for cash $550 (50 bbl. flour).
Sep. 4 Bought merchandise on account from Frank Gray, $25 (30 bu. of oats).
Sep. 5 Bought merchandise for cash from Henry Hogan, $27 (25 bu. wheat).
Sep. 6 Mr. Harrison drew $30 from the business for his own private use.
Sep. 7 Sold merchandise for cash, $420 (25 bbl. flour).
Sep. 9 Sold merchandise on account to Henry Davis, $32 (15 bu. of wheat).
Sep. 10 Paid salaries, $150.
Sep. 11 Henry Davis paid us $15 to apply on account.
Sep. 12 We paid Frank Gray $20 to apply on account

Nov. 1 J. M. Hastings began the flour and grain business at 345 Broadway, with a cash investment of $3000.
Nov. 2 Bought of H. F. Adams, 100 bbl. flour at $4.95 a bbl. and 600 bu. corn at $.30 per bu. Paid 1/2 with company's check, balance on account.
Nov. 3 Paid rent of store, $100.
Nov. 4 Bought a typewriter for office use, $75.
Nov. 5 Bought postage stamps and stamped envelopes, $15.
Nov. 7 Sold N. C. Collins & Co., Brooklyn, N. Y., terms, 5/10, n/30, 150 bu. corn at $.40 a bu. and 50 bbl. flour at $4.50 a bbl.
Nov. 8 Sold for cash to Smith & Robbins, New Haven, Conn., 25 bbl. flour at $6.50 a bbl. and 200 bu. corn at $.40 a bu.
Nov. 9 Bought of W. A. Scott, New York City, on account, 300 bbl. flour at $5 a bbl.
Nov. 11 Paid clerk hire, $57.85.

Nov. 12 Sold Summons & Son, Buffalo, N. Y., for cash, 50 bbl. flour at $6.50 a bbl. and 20 bu. corn at $.45 a bu.

Nov. 13 Sold Smith & Robbins, 100 bbl. flour at $6.50 a bbl. Received their note for the amount of the purchase by them.

Nov. 15 J. M. Hastings withdrew $200 for his own personal use.

Nov. 16 Sent H. F. Adams a check for the balance due on the merchandise they sold to us on account.

Nov. 17 Summons & Son bought merchandise amounting to $250, accepting the terms of 3/10, 2/15, n/30.

Nov. 19 We bought merchandise amounting to $750 from Henderson & Co., terms, 5/8, 4/10, 2/15, n/30.

Nov. 20 Smith & Robbins sent a check for the face of their Note of Nov. 13.

Nov. 21 John Fox & Son bought on account, 100 bbl. flour at $6.75, and 25 bu. corn at $.45.

Nov. 21 N. Collins & Company paid the amount due on the invoice of Nov. 7.

Nov. 22 Paid freight and express charges amounting to $54.75.

Note: The terms, 2/10, 1/15, n/30 mean 2% discount if paid any time before 10 days; 1% off if paid any time before 15 days (naturally between 10 and 15 days); n/30 means the entire bill must be paid within 30 days and no discount will be allowed.
See Chapter Ten for data for Balance Sheet and Loss and Gain Statements.

The bookkeeper has entered the business transactions for the months of April and May in his accounts. He wished to know the *total* amounts of the *debit* and *credit* of each of the following accounts and the *difference* between the *debit* and *credit* side of each account (*Balance*).

1921	**The McGill Company**		1921
		Investment	558.90
		Investment	468.50
		Investment	554.32

1921 **Cash** 1921

Receipts	Payments
1556.25	632.50
1483.75	250.00
538.50	437.50
226.37	205.05
2666.67	1350.27
13.74	243.22
1527.50	33.35
1789.54	372.25
824.32	
730.00	

1921 **Merchandise Purchases** 1921

(Purchases)	(Returned Purchases because of defects for which we receive credit on their books)
4408.70	227.50
7645.63	145.00
13480.89	
8510.25	

1921 **Merchandise Sales** 1921

Returned Sales because of defects for which Credit must be allowed.	Sales
62.50	5605.73
	10100.50
	15125.00
	11950.25

1921	Expenses	1921
	700.00	
	250.50	
	265.25	
	501.10	
	33.35	
	750.30	
	375.68	
	125.05	

1921	George Williams	1921
(Became indebted to us)		(Canceled indebtedness with us)
	538.50	538.50
	785.67	2666.67
	1881.00	1527.50
	1527.50	
	1785.72	

This problem may be worked on the adding and calculating machines. First, find the total of the debit side of each account, and then find the total of the credit side of each account.

Find the difference between the debit and credit side of each account or the balance by subtraction on the calculating machine.

A *trial balance* is the total of the debit side and the total of the credit side of each account in a set of books. The debit side must always equal the credit side of a trial balance, and will, if the bookkeeper has entered an equal debit and credit, for each business transaction.

The following accounts have been taken from the general ledger. The bookkeeper wishes to verify the trial balance before he enters it in his records. He has given the totals of each side of each account. Verify the trial balance on the calculating machine.

(Model)

Trial Balance of the McGill Company

March 4, 1921

Page of Ledger	Name of Account	Debits	Credits
1	The McGill Company	Losses	Investments & gains
6	Cash	Receipts	Payments
7	Merchandise	Purchases	Sales
8	Expenses	Loss to us	.....
9	Browne, Thomas	Owed us	Paid us on account
10	Smith & Foley	Owed us	Paid nothing
11	Rawlins & Sons	(Their account balances, hence not entered)	
12	Lane & Court	Owed us	Paid us on account
13	Smith & Henderson	Owed us	Paid us on account
14	Robinson H.	Owed us	Paid nothing
15	Talcott, James	We paid them on account	We owed them
16	Babcock & Company	We have paid nothing	We owe them
17	Sanders & Company	We paid them on account	We owed them
18	Balk & Tram	(Their account balances, hence not entered)	
19	Notes Payable	We paid on our notes	We owed on our notes
20	Notes Receivable	They owed us on their notes	They paid us on their notes
21	Discount on sales	Loss to us (decreases capital)	.....
22	Discount on purchases	.....	Gain to us (Increases capital)
		Total debits equals total credits	

Always insert the page of the ledger from which the account is taken.

Instead of the explanation given in the debit and credit column of the trial balance insert the figures which are on the debit or the credit side of the following accounts and add the debit and credit column to see whether the debit side is equal to the credit side of the trial balance.

Trial Balance of the McGill Company

5	The McGill Company	.....	40000.00
6	Cash	42783.66	6289.03
7	Notes Receivable	1500.00	500.00
8	Notes Payable	660.00	1660.00
9	Merchandise	9687.38	7938.67
10	Furniture & Fixtures	185.50	.....
11	Expense	293.15	.....
12	Real Estate (Cost)	1645.00	.....
13	John Rupert	765.00	749.32
14	Samuel Raymond	1000.00	1316.20
15	Henry Johnson	92.13	70.00
16	Reynolds & Co	.....	88.60

Trial Balance of the McGill Company

5	The McGill Company	190.00	6220.00
6	Cash	4942.69	3358.50
7	Mdse	8760.00	5085.40
8	Expense	450.00	.....
9	Office Fixtures	187.50	.....
10	Notes Receivable	780.00	254.70
11	Notes Payable	540.00	1040.00
12	Ferris & Co	1045.00	745.00
13	French & Co	198.13	75.61
14	Harris & Co	72.60	487.20
15	Johnson & Co	192.60	92.11

Find the total receipts and the total payments of cash; then *subtract* the payments from receipts in order to find the balance, in the following problem:

Cash		*Cash*	
Receipts	Payments	Receipts	Payments
2175.50	1125.18	1196.25	294.25
346.28	374.60	327.64	1872.19
5923.74	27.42	2748.19	146.72
89.25	826.55	3124.63	345.28
847.19	3245.25	275.40	2173.44
1564.92	173.19	877.89	652.96
2147.29	1824.74	1646.10	1721.40
739.47	392.70	4854.25	1025.01
90.50	213.43	1232.16	108.72
216.10	2174.86	647.23	2096.50
1472.25	917.75	92.46	815.14
674.50	325.50	376.75	1172.60
2175.25	Balance	87.25	Balance

Take a trial balance from the following accounts; verify on the calculating machine.

The McGill Company		Cash	
Loss	Investment	Receipts	Payments
120.00	4000.00	13600.00	10229.50

Merchandise	Purchases
Bought	Returned Purchases
5150.00	85.00

Merchandise	Sales
Returned Sales	Sold
250.00	6675.00

Thomas Browne		Expense	
2500.00	1000.00	675.00	

Smith & Foley		Rawlins & Sons		Lane & Court	
1400.00		800.00	800.00	920.00	350.00

Smith & Henderson		James Talcott		Sanders & Co	
1040.00	800.00	2650.00	5500.00	1300.00	2000.00

Babcock & Co.		Balk & Tramm		Discount on Purchases	
800	700.00	250.00	250.00		17.75

Discount on Sales		Notes Receivable		Notes Payable	
152.25		3000.00	1200.00	1700.00	2700.00

Inventory

An inventory is a list of goods that are on hand in any company's store at any stated period. Some concerns take account of stock every six months. The clerks in each department go through the department and make a list of every item on hand at a certain date. This list is given to the bookkeeper and he fixes the *cost* price of each on the article. The cost price is usually used in figuring inventory because an article may be sold at cost; if the present market price were used the entry would need to be changed if the current market price were changed, because that would show a false profit on the books. A company knows what the goods cost and can usually sell them for the cost price. The cost is not taken when there are exceptionally large declines in the cost price, as in the years 1920 and 1921.

Some stores have a system similar to this. At a certain date they decide to begin to take an account of the merchandise on hand. They place a card in each department on which the list of goods is entered. This card is kept in the department and if any goods are sold the clerk in charge makes a record of this sale on the card. These cards are collected on a certain day. It is an easy matter to figure out the total amount of stock on hand from the cards. The cost price is entered, extensions are made, and the company has a true inventory of that date.

Make out the following inventory, enter the cost price on each article, and find the total. Addition and multiplication may be made on the calculating machine.

The McGill Company *Inventory January, 1921*

Article	Weight	Cost	Total
50 hf. chest Japan Tea	3025 lbs.	25c.	
25 hf. chest Old Rose Tea	1435 lbs.	38c.	
25 hf. chest English Breakfast	567 lbs.	32c.	
27 bales Mocha	3456 lbs.	26c.	
34 mats Java	3200 lbs.	29c.	
25 boxes Pepper	245 lbs.	12c.	
45 cases Evaporated Apples	5671 lbs.	15c.	
67 boxes Farina	6578 lbs.	14c.	
89 cases Dried Cod	232 lbs.	11c.	
600 cans Fish (dried cod)	3145 lbs.	34c.	
4800 pkgs. Macaroni	24000 lbs.	06c.	
54 pkgs. Milk Crackers	540 lbs.	05c.	
25 pkgs. Evaporated Peaches	2545 lbs.	09c.	
450 cans Peas		15c.	
2850 cans Pumpkin		14c.	

The above is, to the best of our knowledge and belief, a correct inventory of the goods on hand in the McGill Company, 210 Bedford Street, Stamford, Connecticut, at the close of business January 31, 1921.

The United States Government has issued an inventory of

its supplies sold by the government officials throughout the United States. These are supplies left from the army and navy after the World War.

(Model Order Blank)

_____1919.

Hon. Byron R. Newton,
Chairman, Food Supply Committee,
Room 135, Custom House.

I desire to order the following Surplus Army Food Products

Quantity	Article	Price	Amount Due
	Tinned Bacon	at .35 a lb.	
	Corned Beef, 1 lb. can	" .29 a can	
	Corned Beef, 2 lb. can	" .55 a can	
	Roast Beef, 2 lb. can	" .63 a can	
	Corn Beef Hash, 1 lb. can	" .22 a can	
	Tomatoes, #2 can	" .09 a can	
	Tomatoes, #3 can	" .11 a can	
	Pork & Beans, #1 can	" .05 a can	
	Wax Beans, #2 can	" .11 a can	
	Stringless Beans, #2 can	" .09 a can	
	Corn, #2 can	" .09 a can	
	Peas, #2 can	" .09 a can	
	Pumpkin, #2 can	" .06 a can	
	Squash, #2 can	" .06 a can	
	Sugar Cured Ham	" .30 a lb.	
	Strip Bacon	" .31 a lb.	
		Total	

Signed_____

Each student will make out an order similar to the above for the purchase of a supply of the above Surplus Army Food. (Order blank is in commercial paper envelope.)

Each is allowed to purchase one ham, and 6 cans of every other article of food.

Using the cost price, which is stated opposite each article, order the maximum amount allowed, make the extensions

(Number of articles, multiplied by the price of the article, per lb. or can) and find the total amount due.

Verify on the adding machine and make out a check to James S. Long and have the treasurer of our company sign it.

(Model)

U. S. Customs Service

NAVY DEPARTMENT SURPLUS FOOD SUPPLIES

Room 135, Custom House

Order Blank

Hon. Byron R. Newton,
Chairman, Food Supply Committee.

I desire to order the following Surplus Navy Food:

Quantity	Articles and Prices						Amount
	Apple Butter, 7½ lb.	cans	[3]	at .61	per	can	
	Apples, No. 2½	"	[24]	" .30	"	"	
	Asparagus, No. 2½	"	[24]	" .30	"	"	
	Apricots, No. 2½	"	[24]	" .30	"	"	
	Beans, String, No. 2	"	[24]	" .10	"	"	
	Bacon, 12 lb.	"	[3]	"2.80	"	"	
	Baking Powder, 5 lb.	"	[3]	" .50	"	"	
	Corn Starch, 1 lb. pkg.		[20]	" .07	"	pkg	
	Corn, No. 2	cans	[12]	" .10	"	can	
	Jams, assorted, 8½ lb.	"	[3]	" .95	"	"	
	Milk, evaporated, 1 lb.	"	[48]	" .11	"	"	
	Peaches, No. 2½	"	[24]	" .30	"	"	
	Peas, No. 2	"	[24]	" .10	"	"	
	Pineapple (sliced) No. 2½	"	[24]	" .30	"	"	
	Prunes, 7 lb.	"	[6]	" .68	"	"	
	Pumpkin, No. 3	"	[12]	" .11	"	"	
	Pears, No. 2½	"	[24]	" .30	"	"	
	Raisins, 5 lb.	"	[6]	" .80	"	"	
	Roast Beef, 2 lb.	"	[6]	" .64	"	"	

Total———

Signed———

U. S. Customs Service

NAVY DEPARTMENT SURPLUS FOOD PRODUCTS

Room 135, Custom House

Order Blank

Hon. Byron R. Newton,
Chairman, Food Supply Committee.

If arrangements can be made as to terms of settlement and date of shipment, I desire to order the following Navy food supplies:

Quantity	Article and Price				Amount
	Apples, evaporated, 25 lb. cans	at	$3.35	per can	
	Baking Soda, 35—1 lb. pkgs. to case	"	.06	" pkg.	
	Barley—100 lb. sacks	"	2.75	" sack	
	Corned Beef, 6 lb. cans	"	1.40	" can	
	Biscuit (hard bread) 25 lb. cans	"	1.05	" "	
	Catsup, No. 10 size (3 qt.)	"	.65	" "	
	Cocoa, 5 lb. cans	"	1.25	" "	
	Mackerel, 100 lb. kegs	"	12.50	" keg	
	Pickles, 92 lb. kegs	"	7.88	" "	
	Pork, salt—100 lb. kegs	"	18.50	" "	
	Salt, 100 lb. sacks	"	1.00	" sack	
	Peaches, evaporated, 25 lb. cans	"	3.35	" can	
	Sauce, Worcester, 5 gal. kegs	"	3.50	" keg	
	Sauerkraut, 6½ lb. cans	"	.36	" can	
	Spinach, No. 10 size cans	"	.53	" "	
	Tea (Ceylon) 42 lb. chests	"	.46	" lb.	
	Vinegar, 22 gal. kegs	"	.29	" gal.	
	Salmon, 1 lb. cans [24]	"	.14	" can	
	Sardines, ¼ lb. flat cans [24]	"	.11	" "	
	Sauerkraut, 6½ lb. cans [2]	"	.36	" "	
	Tomatoes, No. 3 cans [24]	"	.12	" "	
	Dry Beans, Kidney (Kintoki) 5 lb. bags [3]	"	.06	" lb.	
	Dry Beans, Navy 5 lb. " [3]	"	.10	" "	
	Dry Beans, Lima 5 lb. " [3]	"	.11	" "	
	Rice, 5 lb. " [3]	"	.08	" "	
	Syrup, No. 2½ lb. cans " [24]	"	.19	" can	

Signed———————————Dept.————

Room No.————

Make out an order similar to the model for the purchase of surplus food products of the Navy, ordering six articles of each item for use in your neighborhood. Verify extensions on the adding and calculating machine.

The difference in the retail price of government surplus goods in the various sections of the country is due to the local expense of hauling such goods, that is, cost of transportation from the government warehouse to the place of sale of the goods and the damage due to the method of handling the goods after the delivery from the government warehouse.

The numbers enclosed in the small brackets on the model represent the amount of cans or packages of food articles allowed to each person. All individual orders must be settled for in full, therefore students must make out a check payable to James S. Long, Treasurer Food Supply Committee, and enclose the check in the letter in which the order is sent.

Make out a similar order for the maximum amount allowed. Pay by check. Have the proper person sign the check.

Verify all extensions on the adding and calculating machine. Make out the necessary data on the stub of your check in the check book.

Dry Goods Invoices

Verify the addition of the number of yards, the extensions, and after listing the cost, add the extensions to verify the total cost.

The small number written a little above and to the right of the numbers 41, 35, 39, indicate quarter yards, thus 41^1, means 41 and 1/4 yds., 35^2 equals 35 and 1/2 yds. This method of writing quarters is used by the wholesale dry goods companies.

10 pcs. Muslin 41^1, 35^2, 39^1, 34^3 40, 36^2, 35^1, 33^3 40^1, 37^3 = (374 & 1/4 yds) at $.08 1/4	$30.90	

9 pcs. Gingham 24, 31, 28^3, 27^2 28, 28, 26^1, 29^2, 26^2 =(249 & 1/4 yds)	at $.09 1/2	23.70	
12 pcs. Long Cloth 39, 39^2, 39^1, 40^2 38^3, 41^3, 45^1, 44^2 46^1, 44^3, 40^1, 42^3 =(503 & 1/2 yds)	at $.09 3/4	49.09	
	Total		ooooooooooo

When a Split Stick Was a Bank Check

When a man put money in an English bank, three hundred years ago, his deposit was recorded by notches in a stick, which was then split, the bank keeping one half, the depositor the other. Before money was withdrawn, the two halves had to be matched together.

The depositor's half was called "bank stock," the part the bank kept was the "check."

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CHAPTER FOUR

Banking and Business Procedure

Banking and business are dependent upon each other. Success in business depends in a large measure upon banking conditions, and banks depend upon business for their growth. Banks today resort to advertising, a method unheard of in the early days of the banking business. The modern business man understands the assistance that the bank can be to him and talks over his business problems with the bank officials. A man in business may carry on a checking account, borrow money, place funds on interest in the savings department of a bank, buy and sell bonds and securities, discount his commercial papers, and even place his legal papers and valuables in the safe deposit vault within the bank.

In the early days of banking a banker dealt in money only. The early Greek and Roman bankers received deposits of money and often made loans. Small clay tablets of Babylonian days show transactions in promissory notes, checks, drafts, and records of loans on mortgages. Private banking institutions existed in the early Italian cities. The bank of Venice was, probably, the first public bank. This bank received deposits of foreign money and issued certificates of deposit. In 1609 the Bank of Amsterdam was established and accepted money on deposit which could be withdrawn when desired or transferred from one person to another. In 1694 the Bank of England was established to provide funds for the English government. It was incorporated and received its charter from Parliament. This bank laid the foundation of our modern banking system.

Banks in the present century as in the other lines of business have specialized on account of the demands of the service required by modern business conditions.

Commercial and Non-Commercial Banks

There are two kinds of banks, the commercial and the non-commercial. The commercial banks include national and state banks, the banking departments of trust companies, and private banks. National banks operate under a national charter, state banks under a state charter, while private banks are unincorporated. In some states private banks are subjected to inspection by state bank examiners. Commerical banks deal especially in the settlement of business transactions as they receive deposits of cash against which checks may be drawn by a depositor. These banks are often spoken of as banks of discount and deposit. They lend money on short term notes, discount negotiable instruments such as promissory notes and commercial drafts, make collections, and carry on any commercial transactions within the powers granted by their charter.

Savings Banks

Savings banks are non-commercial banks that take small amounts of savings on deposit. These banks afford a safe and moderately profitable means of investing small amounts of savings. They encourage persons of moderate incomes to form habits of thrift by giving a return on savings in the form of interest. Savings banks invest their money on deposit in a prescribed manner and only in safe securities.

Difference Between a Commercial and a Savings Bank

One difference between a commercial and a savings bank is the understanding between the depositors and the bank. A commercial bank will pay the amount of the checks of a depositor, if properly signed by him for the amount for which the check is made out, to the payee or the person named in the

check on or after the date it bears, provided the depositor has sufficient funds on deposit in the bank. Savings banks agree to return any money on deposit either to the depositor or upon his written order and on the presentation of the pass book. They do not encourage demand withdrawals.

In commercial banks the pass book is merely a memorandum of the receipt of deposits, and usually contains no record of the withdrawals of cash or added items of interest. The depositor in a savings bank can make no withdrawals of his money on deposit without producing his pass book in which the amount of the withdrawals is entered by the bank clerk. The pass book of any bank is a receipt for the money deposited and is an acknowledgment by the bank of having received the amount stated on the deposit slip.

Extreme care should always be used in making out a deposit slip in a commercial bank, as it is filed by the bank clerk and is the only legal evidence of the amount of the deposit, should an error be made in entering the amount of the deposit in the pass book. In order to have evidence of the original transaction banks require customers to make out their own deposit slips.

Difference Between a Bank Note and a Bank Check

A *bank note* is a promise by the bank to pay the face value of the note. It is often called a *bank bill.* Bank notes pass without endorsement, and yield no interest to their holders as do promissory notes. A *bank check* is an order on a bank to pay the amount for which the check is made out, on demand or order of the payee (the person named in the check). The check is always signed by a depositor of the bank upon which the check is drawn against funds on deposit.

Federal Reserve Banks

In 1863 Congress passed the National Bank Act providing for Federal supervision of commercial banks, thus securing uni-

formity in the operation of commercial banks throughout the United States. In 1913 the Federal Reserve Act was passed dividing the entire country into twelve Federal Reserve Districts, a Federal reserve bank being located in each district as follows:

Federal Reserve District Number	Location of Federal Reserve Banks
1	Boston
2	New York
3	Philadelphia
4	Cleveland
5	Richmond
6	Atlanta
7	Chicago
8	St. Louis
9	Minneapolis
10	Kansas City
11	Dallas
12	San Francisco

National and Federal Reserve banks may issue money. A National bank note is the promise of a national bank to pay the holder the amount named on the note. The notes issued by each national bank are secured by a deposit of United States bonds with the Treasurer of the United States by the bank issuing the notes.

The Federal Reserve banks are allowed to issue Federal Reserve bank notes and to take over the promissory notes and acceptances from National banks; they are also permitted to issue Federal Reserve notes on their securities, which they hold plus an additional specified gold reserve.

A Federal Reserve note is issued by a Federal Reserve bank to serve as an emergency currency and the Federal Reserve System provides for a money reserve for the existing banks in case of any emergency.

The Federal Reserve bank is a bank for banks, as it assists all banks within its district. Money may be transferred from one

Federal Reserve district to another as needed. If, for example, the Federal Reserve Bank of Boston is in need of money it may rediscount its commercial paper at the Federal Reserve Bank in New York or Philadelphia, and thereby obtain money where it is in abundance. This system has prevented financial panics in recent years.

Postal Savings System

The United States Government authorized the establishment of the Postal Savings System by an Act of Congress, June 25, 1910. Any person ten years of age or over may open a postal savings account in his or her own name by depositing one or more dollars in any post office authorized to accept postal savings deposits. No person may at the same time have more than one account either at the same office or at different post offices. A person may deposit any number of dollars at any time, until the balance to his credit amounts to $2500, exclusive of the accumulated interest. After an account has been opened in the postal-savings depository, deposits may be made in person, by a representative, by money order, or by registered mail.

Postal Savings deposits are acknowledged by postal savings certificates which are made out in the name of the depositor and serve as receipts. A depositor may at any time withdraw all or any part of his postal savings deposits upon demand, from the post office where the deposits were made. Postal savings certificates bear simple interest at the rate of two per cent a year. Amounts less than one dollar may be saved by purchasing postal savings stamps at ten cents each. A postal savings card with ten savings stamps affixed will be accepted as a deposit of one dollar either in opening a postal savings account or in adding to an existing account, or it may be redeemed in cash.

A depositor may transfer his account from one post-office postal-savings depository to another without losing the interest

on his account. A depositor may exchange the whole or a part of his deposits for registered or coupon United States postal-savings bonds, bearing two and a half per cent interest, issued in denominations of $20, $100, and $500. When bonds are issued in exchange for postal savings deposits the balance to the credit of the depositor is reduced accordingly, and he may make further deposits until his account reaches $2500.

Loan and Trust Companies

Loan and Trust Companies are non-commercial banks. Some of them combine a commercial banking business with their loan and trust business. These trust companies may invest their funds in real estate and in loans on inactive securities for long periods of time. They act as holders in trust for bondholders, executors, and administrators of estates, of money property held in trust, and as fiscal agents for corporations, and as guardians to minors. In the capacity of fiscal agent they pay to bondholders the principal of bonds at the date of maturity or pay the interest when it is due on bonds left in their charge.

Trust Companies also administer underwriting syndicates and in case of reorganization or dissolution they act as receivers, looking after the interest of the bondholders. The principal advantages of trust institutions are that they are permanent institutions; they are experienced in their line of business, and have regular business hours. Their transactions are always confidential, and they are in close touch with the financial world and are therefore better informed as to financial transactions than most individuals.

The Numerical Transit System

The *Numerical Transit System* is a time and labor saving device in banking, which designates geographical locations or places and banks by *number* instead of by name and address. William H. Kniffin, Vice President of the Rockville Center,

N. Y., bank, explains this in his text, "The Business Man and his Bank," as follows:

"At the right of the name of the bank on most checks there will be found a small number, thus '1–8.' This is the 'transit number' of the bank and will identify it in any bank. About 1910 the American Bankers Association adopted the plan of giving a number to every bank in the United States, this number to follow the name of the bank on its checks. The large *cities*, as New York, Chicago, Boston, Philadelphia, etc., were given numbers from one to forty-nine and the clearing-house number was added. Numbers from fifty to ninety-nine are used to designate the different *states* of the country. In referring to the National City Bank of the City of New York, in banking circles the numerals '1–8' are sufficient, meaning City No. 1, New York, and bank No. 8 in the clearing house, which is the National City Bank."

Banks in the state of New York outside of the city of New York are numbered 50 while the banks in the state of Connecticut are numbered 51. The transit number of the checks of the First Stamford National Bank, of Stamford, Connecticut, is 51–108, the prefix 51 indicating that the geographical location of this bank is in the state of Connecticut and that 108 is the clearing house number of this bank.

The Clearing House

The preamble of the New York Clearing House states its purpose as follows:

"The object of the association shall be the effecting at one place of the daily exchanges between the members thereof and the payment at the same place of the balance resulting from such exchanges." The object of the clearing house is to facilitate an easy and rapid method of exchange of checks collected and of checks drawn by member banks of the clearing house. Two clearings are made in the New York Clearing House, one at

nine o'clock and the other at ten o'clock. The balance of the first clearings are carried over and included in the final clearings at ten o'clock, when one settlement is made.

The term "clear" means exchange, as the bank that *clears* a check simply exchanges it for another check drawn on itself. All checks received through the clearing house are assorted. The checks of each bank are placed in a package, the amount having been listed on an adding machine, and the total written on the envelope in which the package of checks is enclosed. The *transit number* on checks assists the clearing house clerk as he makes up the list of banks using their *transit number* in place of writing the name and the address of each bank. For example, it is more efficient to record 51–108 and the amount of the checks drawn against this bank than to write, "The First Stamford National Bank, Main Street, Stamford, Connecticut."

Each bank at clearing time has a representative present who has all the checks which his bank holds against other banks and another representative who receives all the checks drawn against his bank, from other banks. The clearing is done on the stroke of a signal bell. Each member bank has a desk arranged in an order as established by the clearing house. The representatives of the different banks exchange checks and within a few minutes each bank representative can ascertain the amount his bank owes to other banks or the amount they owe to his bank.

In the New York Clearing House the settlement of balances is now made by debiting or crediting the amounts to the accounts of the various banks, thus avoiding the use of money. In other clearing houses throughout the United States the settlement between banks is made by checks. The New York Clearing House, in order to encourage efficiency and accuracy on the part of the members, imposes a fine of from one to ten dollars for errors in the work done by the representatives at the clearing house.

Checks

The modern business man uses checks as a substitute for money in the transaction of business. In fact business in the United States is carried on almost entirely by one medium of exchange, the check. Currency is good enough for the small affairs of life, for the incidentals of the day. It is not the Federal reserve notes, the National Bank notes, the gold or silver or the smaller coins, but the bank check which is used by every business concern in America. The American check system serves as the model for all other nations, for in no other country has the check attained such prominence in exchange transactions.

The transfer orders issued by the goldsmiths of London, which permitted the withdrawal of the funds entrusted to their safekeeping, was the forerunner of the modern check. A check gives one the right to suppose that the maker of the check has on deposit in the bank named in the check a sum equivalent to the amount named. Gold as a medium of exchange is almost never visible, being used mostly as gifts, and is never carried as money by persons living east of the Rocky Mountains. Since the World War the use of paper currency has been substituted for gold west of the Rocky Mountains.

Checks represent money and our present checking system makes it convenient to transact an enormous volume of business with a relatively small sum of actual coin and currency, or without even the sight of money. Statistics show that in the year 1920 more than two hundred and fifty billion dollars in checks were passed through the New York Clearing House. When one considers that there are one hundred and fifty-four other clearing houses throughout the United States, and that checks which are cashed directly in the banks at which they are payable are not included in these, he realizes the importance of checks in modern business transactions.

In the United States a large proportion of the population

keeps bank accounts and uses checks. On the other hand in European countries the use of checks is limited because of the long formality of getting a check cashed. In the United States more rapid methods have been developed.

When money was first used as a medium of exchange the great difficulty was to prevent the debasing and the clipping of the edges of the metal used in coining money. An inventor discovered the way to make the edges of all coins serrated or milled like a saw on the edge. Scientists devoted much study to the means of preventing our bank notes and other commercial paper used in banking from being imitated. At present the United States Government uses every means possible to prevent counterfeiting, while the business world has invented check protectors to prevent the alteration of the figures and the name of the payee on checks. The National Bank notes and the Federal Reserve bank notes are of the same dimensions, which makes it convenient in handling a number of them. No uniformity of size in checks exists at the present.

Stop Payment on Checks

One advantage of checks over money lies in the fact that a check which is lost or stolen may be made valueless by stopping payment at the bank on which the check is drawn. The maker of the check is supposed to notify the bank, but often the payee or the person to whom the check is made payable gives the warning to the bank.

The stop-payment order must be *in writing*, and it must reach the bank before the check is presented for payment. An oral stop order is not binding, neither is a telephone request, while a telegraphic stop order would be legally binding on the bank. In filing a stop-payment order the date of the check, the number, the amount for which the check was made out, and the name of the payee must be given.

A card system is used by the bank for recording this data. This card system consists of making out a separate card for each

stop-payment order. Each card is printed generally in red ink as follows:

Memorandum—Stop Payment—on the following check:

Amount of check———————— No.————————

Payee————————————————Maker————————————

Date of check————————————

The data received from the depositor who wishes the payment on the check stopped, is entered on the card, and the paying teller records the facts on a list which he hangs near his window for instant reference. The bookkeeper and the clerks make a card record for their use. The card is then filed alphabetically under the depositor's name and tabbed, indicating the month payment was stopped. At the end of each month the cards of two months standing are removed and the depositors are requested to furnish further information and instructions regarding the stop-payment order which is still in force as far as the bank is concerned. Under certain conditions, the maker of a check is not released from his liability. See Whigham's "Essentials of Commercial Law," pp. 187, 189.

Checks ought to be deposited or cashed immediately. All bank tellers have keen memories for the signature of their depositors. An experienced teller can describe the peculiar characteristics of the signature of the depositors whose checks he cashes. Every depositor signs a signature card when he makes his first deposit and opens a checking account with a bank. He must use the same signature on all checks he makes out as the bank is held responsible for the *signature* only on cheecks. These signature cards are filed alphabetically for reference if a doubt arises as to the signature on a check which is presented for payment to the bank. (See page 88.)

A *check* is a written order on a bank, by a depositor, and is payable on demand. The person who signs the check is the drawer, the person named in the body of the check after the

words "pay to" is the payee, or the person to whom the check is made payable. The bank on which the check is drawn is the drawee. The words "or order" on a check make it negotiable, or payable to some one else besides the person named in the check, if the person named in the check indorses his name on the back of the check exactly as the name is written on the face of the check.

Indorsement of a Check

If a check is payable to the order of the person named in the check, the person so specified must indorse the check (write his name on the back of the check) exactly as it is written on the face of the check. This indorsement for example would be as follows; If drawn to the order of Mary A. Brown it will not do to indorse the check as M. A. Brown. It must be Mary A. Brown.

If a check is indorsed (name written on back) *pay to* Mary A. Brown, and the payee signs her name below, this check becomes the property of Mary A. Brown *only;* but if the payee had written "*Pay to the order* of Mary A. Brown" and had signed her name underneath, it would then be negotiable and transferable by Mary A. Brown to any other person. If the name of the payee is mis-spelled on the face of the check the payee should first write it on the back of the check exactly as it appears on the face of the check, but underneath the name should be written correctly, as:

Marie Brown (as on the face of the check)
Mary A. Brown (correctly written)

The only alteration allowed on a check is that the name of the bank printed on the check may be erased and the name of another bank in which the drawer of the check has funds on deposit subject to his check, may be substituted; e. g., a check on the Corn Exchange Bank could be used by a person having funds on deposit in the Stamford National Bank if the words,

Corn Exchange Bank, were crossed off and the words, *Stamford National Bank*, were written in. This is a very poor policy to follow, and many banks object to this practice.

A check becomes a receipt or voucher after it has been paid by a bank. Canceled checks or vouchers are returned by the bank to the drawer and may be verified and filed numerically for reference.

Certified Checks

When a bank cashier "Certifies" or writes his name across the face of a check it is a guarantee that the drawer has sufficient funds on deposit in the bank named in the check to pay the amount named. The bank assumes the liability for the payment of the certified check, and the amount stated in the check is immediately withdrawn from the amount the drawer has on deposit subject to his check. The amount or the face of the check which has been certified by the cashier is then held by the bank until the certified check is presented for payment.

A canceled check or voucher returned by the bank is a receipt for the items for which the check paid. Many checks have the following on the back:

No receipt is required. Return, if not correct. This check pays in full the following items:

Date	Amount	Credit	Discount	Net Amount

How to Make Out a Check and Check Stub

In writing a check, observe that there are two parts—the *stub* and the *body* of the check. Fill out the stub, first entering the number of the check, the date, the name of the payee or the person to whom the amount named in the check is to be paid, and what the check was made out for.

The stub of the check is a piece of paper which remains in the book after the check is torn out. The stub shows the deposits made, the amount for which the check was made out, and after subtracting the amount of the check, how much money remains in the bank to the credit of the depositor.

1922		DEPOSITS	AMOUNT		CHECKS DRAWN	AMOUNT	
Feb.	1	BALANCE FORD	280	50	No. 95 DATE Feb. 2, 1922		
"	2	Deposit	95	75	FAVOR OF W. S. Brown		
"	5	"	150	25	FOR Rent of store Feb. 1–Mar. 1.	75	00
					No. 96 DATE Feb. 4, 1922		
					FAVOR OF McNulty Bros.		
					FOR Merchandise Invoice #46	42	50
					No. 97 DATE Feb. 6, 1922		
					FAVOR OF Library Bureau		
TOTAL DEPOSITS			526	50	FOR Office Furniture & Fixtures	80	00
LESS CHECKS DRAWN			197	50			
BALANCE FORWARD			329	00	SPECIAL NO. 3 TOTAL CHECKS DRAWN	197	50

CHECK-BOOK STUB

The information contained on the stub of the check book is used in reconciling the bank balance and the check book balance, as explained in the text.

To make out a check properly on a regular blank form issued by the bank, it is necessary to write the number of the check, the date, the name of the person in whose favor it is made out (payee) and the amount for which it is to be made out, written in figures and in full. The amount of the check must also be made out in words preceding the printed word "Dollars" in the body, while the person making out the check must write his signature in the lower right hand corner and must have money on deposit in the bank on which the check is drawn.

Checks are seldom made out for less that ($1) one dollar, but whenever they are, the word "Dollars" should be canceled by drawing a double wave line through it and writing in words, the amount for which the check is made out, as—ONLY SIXTY

A Bank Draft

$550 75/100 Stamford, Connecticut, Nov. 5, 1921

Second National Bank

Pay to the order of.....H. Stanley Finch.....

Five hundred fifty 75/100.....Dollars

To The Corn Exchange Bank
New York, N. Y.

H. S. Mead
Cashier

CENTS—in the body, while 60 CENTS must be written where the figures ordinarily would be written.

If a check is made out for an exact amount of dollars, *no* must be written above the dash and *100* below, as $6 no/100. It may be written xx/100 or 00/100.

Checks reflect the credit of the maker, therefore care must be used in reference to insufficient funds to meet payment and stopping payment or dating checks ahead of the date when the check is given.

A *draft* is a written order in which one person directs another person to pay a specified sum of money either to the order of himself or to the order of a third person named in the draft.

A *bank draft* is a check drawn by one bank on another bank. In the bank draft, p. 75, the Second National Bank is the drawer, H. Stanley Finch is the payee, and the Corn Exchange Bank is the drawee.

Drafts are used in business in the settlement or canceling of indebtedness without the risk or inconvenience of transmitting legal tender or money from one geographic section of the country to another. The parties are:

1—Drawer—One who writes or draws the draft and whose name is written in the lower right hand side of the draft.

2—Drawee—One on whom the draft is drawn and who must pay it, whose name is preceded by the word "To."

3—Payee — One to whom the money is to be paid. His name is written in the body of the draft.

Drafts are generally used as a means of collecting debts. If a customer in Chicago owes $500 to a firm in New York, and this firm in New York owes a creditor in Chicago, the firm in New York writes and makes arrangement with the firm in Chicago to pay the $500 to their creditor in that same city; thus both debts are canceled without any inconvenience on the part of either person concerned in the business transaction.

As an example the following Sight Draft is explained:

A Sight Draft

$500 00/100 Stamford, Conn., Nov. 5, 1921

At sight pay to the order of.....Henry Brown.....

Five hundred 00/100.....Dollars

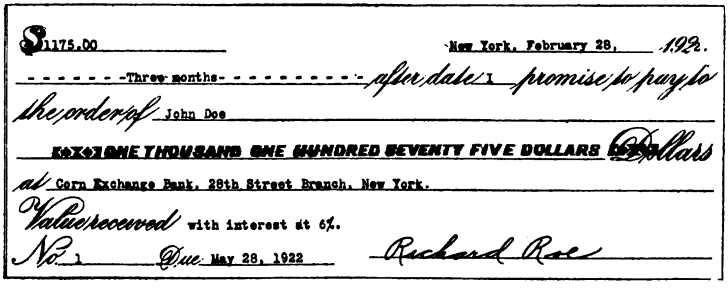
Value received, and charge to the account of

To George Smith F. E. McGill
Chicago, Ill.

Brown and Smith both carry on business in Chicago, Illinois. F. E. McGill, of Stamford, Conn., owes $500 to Henry Brown, of Chicago, Ill. George Smith, of Chicago, Ill., owes F. E. McGill, of Stamford, Conn., $500. F. E. McGill makes out the above Sight Draft and sends it to George Smith of Chicago, Ill., and asks Smith to pay Brown the $500, instead of sending a check for that amount to Stamford, Conn., to McGill. Smith accepts the conditions of the Draft and indicates his acceptance and willingness by paying Brown the $500 which he actually owes to McGill.

If it were a Time Draft he would accept it by writing across the face of the Draft the word "ACCEPTED," the date and his signature, and would pay it on the date it is due.

Smith pays Brown, and thus cancels his indebtedness with McGill, while the transaction also cancels McGill's indebtedness with Brown.


$1175.00 New York, February 28, 1922.
Three months after date I promise to pay to
the order of John Doe
ONE THOUSAND ONE HUNDRED SEVENTY FIVE DOLLARS Dollars
at Corn Exchange Bank, 28th Street Branch, New York.
Value received with interest at 6%.
No. 1 Due May 28, 1922 Richard Roe

PROMISSORY NOTE

A *Promissory Note* is the written promise of the maker or person who signs the note to pay to the person named in the note, to his order or to the bearer, a specified sum of money which is named in the note. The payment is to be made at a specified time and place, usually at the bank named in the note or at the place of business of the maker of the note.

Note the *difference* between a *Draft* and a *Promissory Note*. A Draft is an *order* to pay the sum named in the Draft. It is drawn *on* a person, and is usually drawn to effect a prompt cancellation of a debt. A Promissory Note is a *promise to pay* the sum named in the note and is *drawn* by the person who promises to pay the note and is usually drawn in order to borrow money, which the borrower expects to repay within the time named in the note.

Form of a Certificate of Deposit

$500 00/100 SECOND NATIONAL BANK

Stamford, Conn., November 25, 1921

John H. Keating has deposited in this bank

Five hundred 00/100.....Dollars

payable to the order of himself on the return of this certificate properly indorsed.

H. S. Mead,
Cashier

No. 94

A certificate of deposit is a written statement issued by a bank to a person who deposits money for safe-keeping. It contains the promise of the bank to return the specified sum on the return of the certificate. A certificate of deposit is of the nature of a promissory note.

Indorsement of commercial papers is a statement and signature written on the back of the paper, and is usually for the purpose of transferring the paper to some one, or to add to its security, or in the case of a mortgage note to record partial payments on the principal or face of the note.

The important kinds of indorsements are:

1. Blank indorsement, as: Florence E. McGill—the name only of the indorser.
2. Special—Pay to the order of
   The Gregg Publishing Company
   Florence E. McGill

   This form directs payment to a specified person, to order or to bearer.

3. Qualified—Without Recourse

Florence E. McGill

or

Pay to the order of

The Gregg Publishing Company

Without recourse

Florence E. McGill.

The words "without recourse" excuse the indorser from further liability of payment.

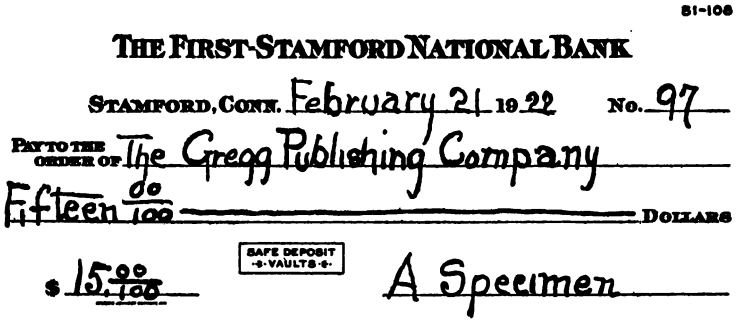
Protection of Checks

Many devices are used by business concerns in order to protect their checks from alteration. Checks have been altered by changing the date, by removing the name of the payee and inserting "Bearer" and in some cases where the amount for which the check is made out is small a higher amount is inserted.

When an altered check is presented at the bank on which it is drawn the money is sometimes paid, because the signature of the maker of the check is recognized by the bank teller. The bank has the signature cards of their depositors on file for reference, and as they are responsible for the signature of the maker of a check drawn on their bank, if the signature is a forgery and the bank teller pays the amount of the forged check, the bank must refund the amount paid on the forged check.

As the bank is held responsible for the *signature only*, the maker of a check must protect the *amount* and the *name of the payee*. The "pen change" which is a common method of alteration of checks is usually due to carelessly written checks. A word or a syllable is sometimes added where blank space has been left on the line for the written amount. A check should be carefully written leaving no blank spaces at the beginning, the end, or between the words of the written amount, and the letters composing the words should be written plainly and clearly formed.

The model below is a *properly written* check:


81-108

THE FIRST-STAMFORD NATIONAL BANK

STAMFORD, CONN. February 21 1922 No. 97

PAY TO THE ORDER OF The Gregg Publishing Company

Fifteen 00/100 DOLLARS

SAFE DEPOSIT VAULTS

$ 15.00/100 A Specimen

A. Specimen is the maker, The Gregg Publishing Company is the payee, and the drawee or bank on which the check is drawn is The First Stamford National Bank.

Among the devices most commonly employed for protecting checks against alterations are punching and check-writing machines, indelible ink, sensitive ink tints applied to paper, and the genuine safety paper. The bank punch protects the amount of the check by punching the figures through the paper, the perforations appearing as a series of small round holes. Check-writing machines generally cut the amount in figures or words in the check by a revolving cylinder which forces indelible ink into the paper. Some object to these machines as they protect only the amount or the name of the payee. The amount, the payee's name, the date and the indorsements must be protected. (See specimen, p. 78.)

Most banks use a genuine safety paper which contains chemicals which are soluble and very sensitive to acids, alkalis or other bleaching agents. When this paper is written upon, the chemicals tend to "fasten" or to absorb the ink. Any chemical agent which will dissolve and remove the writing ink upon this paper will likewise remove or

affect the chemical dyes in the paper, thus producing a conspicuous and readily detectable stain, and instantly expose an attempted fraud. The safety paper used in making checks (National Safety Paper) protects every part of a check.

A combination of a modern writing machine in conjunction with safety paper would be most effective. Safety paper furnishes the basis of protection to the different parts of the check while the writing machine partially protects the check against "pen changes" and any attempt to raise the check so protected by erasure of the words or figures written by the machine, would be exposed by the appearance of the safety paper after the alteration.

Another device used for protecting checks provides that the amount for which the check is made out be proof against alteration by writing the amount in the body of the check *in words*, representing dollars and cents exact by writing a complete word to each stroke of the handle of the device. The company making this protector issues to its users a bona-fide forgery insurance policy, indemnifying the user against loss or lawsuits on checks written under the terms of the policy.

Exercises

1—Make out a check dated today on the First National Bank of your city for $275.85, payable to Mary H. Kane.

2—You owe The McGill Company $128.75. Pay them by drawing a check on the Second National Bank of your city.

3—You have received a check from The McGill Company for $259 payable to your order, but your name is mis-spelled. Indorse the check properly, and, by indorsement, transfer the check to Henry Peterson only.

4—Write to one of the flour and grain companies nearest your city and order merchandise. Inclose a check for the amount due and ask for a copy of their latest price-list.

5—Order merchandise from the grocery company nearest your city; inclose a check for the amount due, and express a desire to have the merchandise shipped by freight *via* the main railroad system passing through your city.

6—Make out a check for $253.75 dated today on the Second National Bank, making Henry Harrison the payee.

7—You owe Thomas Fairbanks $67.75. Make out a check for this amount on the Second National Bank.

Note: Record all necessary data on the stub of the check book.

Depositors' Ledger Kept by the Bank

A commercial bank must keep a bank ledger, also called a depositor's ledger, in order to know the balance, subject to check, in each depositor's account at the beginning of each day.

A depositor might overdraw his checking account if the bank did not keep this record for ready reference.

All depositors' names are listed alphabetically in this ledger, surname first. Then follows the balance on the previous day at the close of banking business. This balance shows the amount deposited in that bank subject to the check of the individual depositor whose name is written opposite.

All checks paid out by the bank during the day are listed separately and entered under item, *checks*, opposite the name of the depositor whose checks were paid by the bank.

The *total checks* is listed next showing at a glance the total amount of money paid out of each depositor's account that day.

The *deposits* made by each individual are next listed showing the total amount to be added to each depositor's account after the total checks paid are subtracted. The individual deposit slips on which the depositor has listed each item separately are filed alphabetically for future reference as only the total deposits is necessary in this ledger.

At the end of business hours the clerk in charge of the depositors' ledger subtracts the total checks paid out that day, from each individual account, and adds the total deposit made by each individual, thus finding the balance for beginning business the next day.

Assume that you are in charge of the depositors' ledgers in

the Second National Bank in your town or city, and work the following problem:

Depositors' Ledger
of
The Second National Bank of Stamford, Conn.

Name of Depositor	Old Balance A. M. 12/27/20	Checks paid	Total Checks	Deposits	Balance Subject to Check (Next Day) 12/28/20
Aaron, David H.	1296.52	150.50 25.75	?	85.50	?
Adamson, Henry L.	875.45	245.34 70.25	?	120.00	?
Andrews, James H.	2145.89	158.45 234.85 35.25	?	85.25	?
Bracken, Mary A.	4153.65	2150.50	?	..	?
Brown, Charles D.	425.65	110.15 37.85	?	35.75	?
Cooke, George H.	673.55	45.65	?	..	?
Davidson, Frank S.	1345.67	357.45 25.36	?	75.25	?
Edwards, Helen G.	183.65	45.63 10.50 5.64	?	55.75	?
Fallon, Lillian H.	1575.65	34.65 5.87 56.90	?	105.50	?
Faucett, George H.	546.67	..	?	..	?
Groegan, Grace M.	75.68	23.50	?	..	?
Hogan, William H.	1678.63	..	?	..	?

In bank ledgers the headings are repeated across the top of the book to avoid copying the names of the depositors every day.

Assignment:

Find the total checks paid by the bank from each depositor's account.

Find the balance subject to each depositor's check at the close of business on the above date.

Note:

With the above data the *bank* could find

1. The total amount paid out, 12/27/20, on checks.
2. The total amount received on deposit, 12/27/20.
3. The total amount of money on hand subject to check accounts of depositors.

The Auditor's journal of checks and deposits will illustrate this.

Auditor's Journal of Checks and Deposits

9/30/19

Bookkeeper's Signature _____

Old Balances	Checks in Detail			Date	Deposits	Balance	Depositors
876908.76	78654.88	9870.31	1326.54		106453.23	893510.26	Brought forward (9/30/19)
475.29	35.19	45.00	50.00				
	10.00	5.17	18.00				
	1.50			30		310.43	Sayer, A. C.
275.63	15.00	35.00	13.92				
	125.88	5.16	3.00	30	20.63		
					2500.00	2598.30	Seaman & Co.
750.02	25.12	18.00	25.00				
	4.50	3.80	7.92				
	75.17	25.25	50.00				
	5.00	9.99	6.45				
	1.50	2.00		30		490.32	Smith & Smith
3575.17	50.22	75.09	45.13				
	4.54			30	475.81	3876.00	Sterling Farm
350.93	4.12	3.62	5.00				
	25.00	50.95		30		262.24	Terry, C. E.
250.65	50.00	159.00	6.00				
	10.02	25.00	56.56				
	8.03	3.50	5.00	30		O. D. 72.46	Tilghman, R. A.
675.45	50.12	75.90	35.29				
	125.16			30	500.00	888.98	Torrey, H. & Son
525.53	76.66	8.54	4.56	30		435.77	Tourette J. J.
22856.34	180.00	56.98	9.99				
	25.00	45.00		30		22539.37	Unger & Thiel
550.55	76.67	45.45	56.23				
	25.00	50.50	18.00				
	5.00			30		273.70	Utterman, C. H.
375.62	50.00	125.82	56.87				

Auditor's Journal of Checks and Deposits—*Continued*

	4.50	5.60	8.90	30	1272.61	1396.54	Wagner Bros.
195.56	8.34	5.00	75.56				
	10.00	17.00		30		79.66	Wahl, M. A.
456.45	44.40	34.21	50.00				
	113.50	105.49	3.50				
	45.25	50.00	18.00				
	5.12			30	13875.00	13861.98	Warren & Son
10635.82	183.33	46.90	26.00				
	3.00	45.70	5.00				
	7.00	10.00		30		10308.80	Weil Co.
129.57	12.90	6.00	2.75				
	85.00	9.82	6 70				
	2.50	11.00	25.00	30	852.47	820.37	Wheeler, O. J.
201.57	2.50	12.75	20.00				
	40.00	58.65	1.25	30	450.00	516.42	Wilson & Co., R.B.
919188.91	80286.62	11163.15	2042.12		126399.75	952096.77	Totals

Total checks paid { 80286.62, 11163.15, 2042.12

Note: R. A. Tilghman has *overdrawn* his account. His old blance is $250.65. They exceed his balance. His checks in detail $323.11. Subject to check by $72.46.

Verify on the calculating machines, the following:

1—The total of the old balance

2—The total of the checks paid out September 30, 1919. by the bank, according to the auditor's statement

3—The total deposits received on September 30, 1919

4—The total balance and the balance subject to the check of each depositor

Elliott-Fisher Bank and Trust Co.
Harrisburg, Pa.

ACCOUNT No. 1945
NAME R. B. Woolson & Co.
ADDRESS 2592 Third St., City.

Old Balance	Checks in Detail			Date 1919	Deposits	Balance	Depositor
				Aug.	Balance brought forward	633.79	R. B. Woolson & Co.
633.79	12.75	125.50	1.75				
	5.00			6		488.79	R. B. Woolson & Co.
488.79	8.72	45.32	13.97				
	21.00	.50	5.00				
	1.25			12		393.03	R. B. Woolson & Co.
393.03	25.76	31.00	1.80				
	3.10			14		331.37	R. B. Woolson & Co.
331.37				15	200.00	531.37	R. B. Woolson & Co.
531.37	125.00	24.35	18.76				
	23.70	3.40	5.00				
	8.75	.75		19		321.66	R. B. Woolson & Co.
321.66	5.00	12.50	1.75				
	12.75	5.00	1.25	27		283.41	R. B. Woolson & Co.
283.41	23.76	1.57	23.87				
	1.00	15.89	2.34				
	12.30	.75	7.50				
	2.18			30		192.25	R. B. Woolson & Co.
				Sep.			
192.25	13.45	2.50	16.72				
	3.67	76.20	.40	2	500.00	579.31	R. B. Woolson & Co.
579.31	120.00	13.50	1.25				
	6.10			4		438.46	R. B. Woolson & Co.

Verification of the Elliott-Fisher Bank and Trust Co.—*Continued*

438.46	10.00			8		428.46	R. B. Woolson & Co.
428.46	1.35	35.64	100.00				
	23.80	1.50	8.70				
	2.10			12		255.37	R. B. Woolson & Co.
255.37	12.00	13.56	1.00				
	2.80	56.25	5.75				
	.75	1.87	3.21				
	25.00			16		133.18	R. B. Woolson & Co.
133.18	125.00	5.00		18		3.18	R. B. Woolson & Co.
3.18				18	550.25	553.43	R. B. Woolson & Co.
553.43	32.75	25.00	1.75				
	3.56	8.75	28.75				
	1.67			22		451.20	R. B. Woolson & Co.
451.20	8.62	12.78	120.00				
	18.25			25	200.00	491.55	R. B. Woolson & Co.
491.55	50.00	1.64	13.10				
	.60	24.35		26		401.86	R. B. Woolson & Co.
401.86	5.00	12.75	18.00				
	17.10	2.37	1.85				
	7.45	52.87	.50				
	25.00			27	25.00	283.97	R. B. Woolson & Co.
283.97	34.50	10.00	5.50				
	1.80	4.85	25.00				
	.75			29		201.57	R. B. Woolson & Co.
201.57	2.50	12.75	20.00				
	40.00	58.65	1.25	30	450.00	516.42	R. B. Woolson & Co.

The preceding account shows the transactions carried on by one depositor, R. B. Woolson & Company, with his bank.

Find the following:

1—The total amount of checks paid by the bank for R. B. Woolson & Company

2—The total deposits made by R. B. Woolson & Company

3—The balance, August 30, 1919, subject to check

4—The balance, September 30, 1919, in the Elliott-Fisher Bank and Trust Co., subject to the check of R. B. Woolson & Company.

Reconciliation of Bank Balance

When a person wishes to open an account with a bank in order to be able to draw checks against his deposit in that bank, unless he is personally acquainted with the officials of the bank, he is introduced by a friend or another customer of the bank, or he must submit letters testifying to his character and financial reliability.

He is then required to fill out a card similar to the form shown below. This card and a signature card is filed in the records of the bank. The bank requires a signature card from each depositor so that his signature on checks or other com-

mercial papers may be verified by the paying teller or any other bank official.

On the form shown below the signature card and the card on which the name of the depositor, his business address, date of opening an account with the bank, and the nature of his business is given on one card, thus making it necessary to file this data only once.

(MODEL SIGNATURE CARD)

Name.....

Business Address.....

The following is my authorized
signature for the SECOND NATIONAL BANK

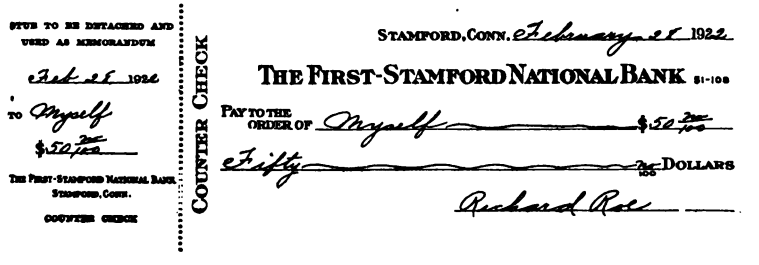
.....

.....

Date.....

Business.....

After the person has been accepted as a depositor of a bank he is given a check book, containing blank checks with attached stubs. No one is allowed to draw a check on a bank in which he is not a depositor. To avoid having a stranger pick up a blank check from the counter in the outer office of a bank and make out a check on a bank in which he is not a depositor, several banks have printed "Counter Check" in


STUB TO BE DETACHED AND USED AS MEMORANDUM

February 1 1922

TO Myself

$50 00/100

THE FIRST-STAMFORD NATIONAL BANK, STAMFORD, CONN.

COUNTER CHECK

COUNTER CHECK

STAMFORD, CONN. February 1 1922

THE FIRST-STAMFORD NATIONAL BANK 81-108

PAY TO THE ORDER OF Myself $50 00/100

Fifty 00/100 DOLLARS

Richard Roe

large letters across the entire face of these checks, which are placed in a box for the convenience of their depositors.

Deposit slips are furnished by a bank to its depositors. The date of the deposit and the name of the depositor are entered by the depositor. Each item of deposit is listed separately, as, Bills, Specie, Checks (Name of Drawer of the check listed separately with the amount to be paid on the check). After the depositor makes out his deposit slip he hands it together with the funds listed on the slip and his Bank Pass Book to the Receiving Teller at his window in the Bank. The Teller examines the items listed on the deposit slip, counts the money, examines the checks to see whether they are properly indorsed, and after verification he enters the amount of the deposit in the bank pass book and returns the bank pass book to the depositor.

DEPOSITED TO THE CREDIT OF

_____

IN

THE FIRST-STAMFORD NATIONAL BANK

STAMFORD, CONN.

_____ 192____

PLEASE LIST EACH CHECK SEPARATELY

	DOLLARS	CENTS
CURRENCY		
SILVER		
GOLD		
CHECKS AS FOLLOWS		
TOTAL $		

SEE THAT ALL CHECKS AND DRAFTS ARE ENDORSED

Some commercial banks keep a regular cash book account with each depositor in each despositor's individual pass book. The pass book is the bank's cash account with the depositor. On the receipt or debit side of the pass book the teller always enters the amount of the deposit, and usually signs his initials on the line between the date of the deposit and the amount

of the deposit. In former days the bank called for the pass book on a certain date and entered the amount of each payment made by the bank on checks separately on the payment or credit side of the pass book. It found the total receipts by adding the deposits on the debit or receipt side of the depositor's pass book, and the total payments made on checks by adding the entries they had just made on the payment or credit side of the pass book. By subtracting it found the bank balance or the balance the depositor had in the bank subject to checks drawn by him.

The bank also listed the checks paid or the canceled checks which were enclosed in a package which was then returned to the depositor. The bank sent a notice to all depositors to call at the bank for their pass books, list of canceled checks, and notice of their bank balance.

These days of efficiency have changed that process and now all banks have adopted something similar to the method used by the First National Bank of Stamford, Conn., the model of which follows:

Miss Florence E. McGill
210 Bedford Street
Stamford, Conn.

Statement of Account
with
THE FIRST NATIONAL BANK
Stamford, Conn.
Kindly report any change of address.

Date	Checks Listed in order of payment		Read Across	Date	Deposits
1920			Balance brought forward from last month		‡‡‡‡‡‡‡‡‡‡‡
Mar. 12	‡‡‡‡	‡‡‡‡			
Mar. 15	‡‡‡‡				‡‡‡‡‡‡‡‡‡‡‡
Mar. 20	‡‡‡‡				‡‡‡‡‡‡‡‡‡‡‡
Mar. 24	‡‡‡‡‡	‡‡‡‡‡‡			
Mar. 30	‡‡‡‡‡				
			Balance, April 1, 1920		‡‡‡‡‡‡‡‡‡‡‡

Please examine this statement at once.
If no errors are reported in ten days the account will be considered correct.
Use your bank pass book only as a receipt when making deposits.

On the opposite side of the bank statement is the following:

Reconcilation of Account with

THE FIRST NATIONAL BANK OF STAMFORD, CONN.

Checks Outstanding:		*To prove the balance as shown on your statement*
Number of Check	Amount of Check	Compare checks returned with checks listed on the other side. Sort the checks numerically or by the date issued. Check off on the stubs of your check book each of the checks paid by the bank and make a list of the numbers and the amounts of those checks still outstanding and list them in the blank opposite. (Checks made out by you and mailed by you but not yet presented to the bank for payment.) Add this amount to the balance shown in your check book.

Total checks Outstanding:

Balance as per check book: Total.....

Bank Balance as per Statement: Total.....

This statement is furnished to our customers instead of Balancing the Pass Book. It saves you the trouble of bringing the Pass Book to the Bank and waiting for it to be balanced. These statements will be found very convenient to check up and file.

Use your Pass Book only as a receipt book in making deposits.

This is a great improvement over the old-fashioned way, and is one method that shows how business houses have improved their methods within the last fifteen years.

Re-read the instructions and then reconcile the bank balance and check-book balance on the problems assigned.

When the canceled checks or vouchers are returned from the bank, verify the check-book balance with the balance in the bank of deposit.

1—Arrange the canceled checks numerically.

2—Verify them with the numbers on the stub of your check book. Find which numbers are missing.

3—Place a mark on the stub for every canceled check or voucher received from your bank. List the number of each check and the amount of each check which the stub shows you have made out and sent by mail to your creditors and which have not yet been presented to the bank for payment.

4—Find the total deposits since the last bank statement of your account.

5—Find the total amount of the checks made out by you since that time according to the check-book stubs, and also the amount of any checks not paid by the bank to your creditors previous to the last statement made by the bank.

6—Subtract the total checks from the total deposits made. This will give the true bank balance.

7—Add the total of the checks still outstanding and not yet paid by your bank according to the unchecked stubs of the check book.

8—Add this to the true bank balance and it will then agree with the balance in the bank subject to check or the balance as stated in the bank statement.

(Model)

Sept. 1, 1920.

			Checks Outstanding	
Total Deposits	$10205.94		No. 352	$103.63
Total Checks as per check-book stubs	6009.48		" 361	66.37
			" 365	90.04
			" 369	283.69
True Bank Balance in check book	$ 4196.46		Total checks not yet paid by the bank	$543.73
Check-book balance	$4196.46			
Checks outstanding	543.73			
Bank's balance or	$4740.19			

Note: The difference of $543.73 between the Bank's ledger and the check-book balance is due to the outstanding checks as explained bove.

Assignment for student to work:

You have just recived the following statement and canceled checks from your bank. Reconciliate your bank balance and your check-book balance after you have checked your stubs. You will then file the canceled checks, alphabetically using the name of the payee as the name for filing.

Checks returned (check number 40) #40 for $35.00, #42 for $125.16, #43 for $553.76, #44 for $36.50, #45 for $75.60, #47 for $1146.37, #48 for $185.50, #49 for $347.33, #51 for $36.50, #52 for $210.50, #53 for $1.35, #54 for $2.30, #56 for $45.50, #57 for $25.00, #58 for $56.25, #61 for $3.50, #62 for $162.38, #63 for $26.00, #64 for $3.75, #65 for $36.50, #66 for $44.27, #67 for $109.15, #68 for $2.75, and #69 for $36.90

The total deposits were $6813.78. The bank balance as in the statement of the bank was $3506.36.

The following checks were outstanding after we checked up

the stubs: #41 for $100.15, #46 for $56.75, #50 for $25.10, #55 for $15.85, #59 for $61.45, #60 for $72.35.

Find the true bank balance in the check book on the following, as of March 1, 1921:

Checks paid out	*Deposits made*	
#1 for $54.40	Old Balance from the last statement	$2342.25
#2 for 235.56	Feb. 5	452.20
#3 for 65.50	6	340.50
#4 for 250.75	7	150.70
#5 for 450.00	8	525.25
#6 for 125.48	10	315.56
#9 for 78.74	12	241.38
#11 for 50.00	14	375.85
#12 for 110.00	15	810.35
#13 for 425.35	16	180.89
#17 for 4.75	18	350.60
#18 for 21.25		
#19 for 10.15		
#20 for 278.45		

Checks outstanding

#7 for $57.50
#8 for 320.10
#10 for 42.35
#14 for 68.50
#15 for 125.25
#16 for 4.50

Find the bank balance as of March 1, 1921.

Find the amount of the checks outstanding of this date.

Find the true bank balance of March 1, 1921. (The balance as shown in the check book subject to check).

The Payroll

Payroll, Payroll Check, Currency Memorandum, and Payroll Memorandum for the Bank

The payroll of a company contains the names of the employees, number of hours or days each employee works, the

total hours or days, the wages by the hour or by the day, and the total wages or total salary due each employee. Employees sometimes must sign the payroll on the line which contains the above data. This certifies that the data is correct.

The payroll check is made out for the amount of the payroll, or individual checks are made out for each employee.

When companies make out a check covering the total amount of the payroll, it is necessary for the person in charge to make out a currency memorandum in order to have the exact amount of bills and specie to place in the individual envelopes. This is necessary when a large number of employees must be given envelopes containing bills and specie.

For the convenience of the person in charge of placing the money in the envelopes, and for the convenience of the bank teller who cashes the payroll check for that person, a payroll memorandum is made out from the currency memorandum.

One of the latest mechanical inventions is the International Payroll Machine. This machine computes the change list automatically the money to be paid being placed, automatically, in the envelopes. A printed record of each item is kept in order to verify the payroll. When the money for the payroll is received from the bank the exact amount of the payroll is placed in the slots of the different denominations as five, ten, twenty-five, fifty cents, and pennies. Bills may be inserted in the pay envelopes by hand, while silver dollars may be inserted in the envelopes automatically.

The full amount of each employee's pay is listed at the time the change is being paid automatically into the envelopes, so that a check on the amounts in the envelopes is made against the payroll sheet from which they were copied. The payroll clerk has a complete check on the payroll, and the amount received from the bank teller who cashed the payroll check; thus the necessity of counting all the change after it is received from the bank is eliminated.

Payroll Memorandum for the bank teller when a company uses the International Payroll Machine:

COIN SCHEDULE
for

Payroll No.....Date.....

To.....Bank

We request the honoring of our check for $.....
in the following demonstrations of coin, *not currency*.

	Number	Total Number	Value	
Pennies				
Pennies				
Nickels				
Dimes				
Dimes				
Quarters				
Half—Dollars				
Dollars—Silver				
Dollars—Silver				
Twenties—Gold				
Twenties—Gold				
Twenties—Gold				
Tens—Gold				
Fives—Gold				
		Grand Total		

Model Payroll

Payroll of The McGill-Company for the week ended.....1920

Name of Employee	Hours per day						Total hours	Wages per hour	Total Wages
	Mon	Tues	Wed	Thurs	Fri	Sat			
Anderson, Jennie	7	6½	8	7½	7	3	39	$.30	$11.70
Bracken, Helen	8	8	8	8	8	4	44	.28	12.32
Clark, Mary	8	8	5	4	8	4	37	.27	9.99
Davidson, Grace	6	5½	7	8	8	4	38½	.32	12.32
Edwardson, Alice	8	7	8	6½	8	4	41½	.28	11.62
							Total Payroll		$57.95

Currency Memorandum

(Model) Bill and Specie Memorandum for the above Payroll.

Name	Total Wages	$10	$5	$2	$1	50c	25c	10c	5c	1c
Anderson, Jennie	11.70	1			1	1		2		
Bracken, Helen	12.32	1		1			1		1	2
Clark, Mary	9.99		1	2		1	1	2		4
Davidson, Grace	12.32	1		1			1		1	2
Edwardson, Alice	11.62	1			1	1		1		2
		(4)	(1)	(4)	(2)	(3)	(3)	(5)	(2)	(10)
		$40	$5.	$8	$2	$1¼	.75	.50	.10	.10

Total currency For payroll } = $57.95

Four $10 bills	Four $2 bills	Three 50c pieces	Five 10c pieces	Ten 1c
One $5 bill	Two $1 bills	Three 25c pieces	Two 5c pieces	pieces

Payroll memorandum for the bank when the money is inserted in the pay envelopes by hand.

The total currency for the payroll equals $57.95: Four $10 bills, four $2 bills, three 50 cent pieces, five 10 cent pieces, one $5 bill, two $1 bills, three 25 cent pieces, ten 5 cent pieces, and ten 1 cent pieces. If the payroll sheet is wide enough, the bill and specie memorandum may be extended from the side of the payroll.

PAY ROLL SLIP

THE FIRST-STAMFORD NATIONAL BANK

STAMFORD, CONN. Feb. 18, 1921.

CURRENCY WANTED BY

DENOMINATIONS	AMOUNT		
Hundreds			
Fifties			
Twenties			
Tens	4	40	00
Fives	1	5	00
Twos	4	8	00
Ones	2	2	00
Halves	3	1	50
Quarters	3		75
Dimes	5		50
Nickels	2		10
Cents	10		10
Total,		57	95

(MODEL PAYROLL CHECK)

No. 25 Stamford, Conn., March 21, 1921.

FIRST STAMFORD NATIONAL BANK 51–108

Pay to.....Mary Johnson for Payroll.....or order

Fifty-seven 95/100.....Dollars

$57 95/100 (Signed) Florence E. McGill, Treasurer
THE McGILL COMPANY.

Assignment on Payroll:

1. Make out the payroll for the following employees of The McGill Company, using as a model the payroll as given on page 96.
2. Find the total hours each employee worked this week.
3. Find the total wages due each employee.
4. Make out the payroll check and have the chief clerk sign it for the treasurer. He has power of attorney to sign checks.
5. Make out a currency memorandum for your convenience in making up the amount to place in each envelope.
6. Make out a payroll memorandum for the bank teller who cashes the payroll check.
7. Write each employee's name on a small pay envelope and write amount due in small figures in the lower left-hand corner.
8. When you receive the money from the bank, place in the envelope the exact amount stated in the lower left-hand corner, and give all the envelopes to the paymaster or chief clerk.

List of employees of The McGill Company, hours per day, wages per hour:

Name	M	T	W	T	F	S	Price per hour
Anderson, Jennie	8	6	6½	7	8	4	$ .30
Bracken, Helen	7	8	6	8	7	5	.35
Clark, Mary	8	7	7	7	5	6	.28
Davidson, Grace	9	8	6	8	8	5	.33
Edwardson, Alice	8	8	8	7	7	5	.40
Frank, Rebecca	7	8	8	9	6	6	.38
Galinsky, Rose	7¾	6	7	8	3½	5½	.42
Harris, Mabel	6	7¼	8	8⅜	8	4¼	.35
Iskowitz, Alice	8	7	7	8	7	5	.50
Jacobson, Edith	7	7	7	7	8	6	.42
Kirby, Mary	6½	6	6	7	7	6	.35
Lane, Theresa	5	6	6	7	7	4	.25
McManus, Grace	8	8	8	8	8	5	.50

9. Complete the following payroll:

	Mon	Tues	Wed	Thurs	Fri	Sat	Total	At	Amount Due
Anderson, Jane	8	8	8	7¾	8½	8		.34	
Brenner, Mary	6	8	6	9	7	8		.25	
Carson, Clara	8	8	8	7½	6	8		.46	
Davis, Stella	9	9	8	9	8	7		.45	
Edwards, Emma	7	6	8	7	5	6		.54	
Frank, Alice	8	8	7	8	8	4		.28	
Grant, Florence	6	8	9	9	9	2		.75	
Harris, Anna	4	7½	8	7	7	9		.30	
Irwin, Rose	7	9	4	8	8	7		.65	
James, Grace	8	8	6	9	9	5		.45	
Kane, Bertha	9	4	7	7	7	8		.70	
Lawrence, Laura	5	6	8	4	9	4		.55	
Morris, Alice	4	3	3	5	7	6		.65	
Nelson, Jennie	8	8	2	6	8	7		.25	
Olson, Mary	2	7	9	3	6	9		.35	
Pierson, Carrie	6	4	7¾	9	9	10		.45	
Quinn, Frances	9	8	4	8	7	8		.30	
Roberts, Helen	7	7	6	7	8	4		.25	
Samuels, Edna	4¾	9	9	4	4	7		.60	
Thomas, Esther	7	2	8	9	6	5		.70	

Verify all results on the calculating machine.

10. Make out a deposit slip for the following items, listing each check separately:

The bank deposit of The McGill Company for October 1, 1921. 30 one-dollar bills, 4 two-dollar bills, 1 five-dollar bill, 17 fifty-cent pieces, 33 twenty-five-cent pieces, 41 dimes, 67 nickels, 125 pennies, 2 checks on The Second National, of Hartford,

Conn., one for $25.75, and the other for $12.25; one check on The Corn Exchange Bank for $26.17, one on the New Haven, Conn., Third National for $32.45, and one on The Fidelity Title & Trust Co., Stamford, Conn., for $36.78.

11. Find the total amount of currency, the total amount of silver, the total amount of the checks to be deposited on the adding machine.
12. Make out the deposit slip on the typewriter, using *carbon*. *File* the carbon copy.

Trade Acceptance

The Federal Reserve Bank has defined a trade acceptance as a bill of exchange drawn by the seller of merchandise on the buyer of the merchandise for the purchase price of the goods and bearing on the face of the acceptance the signed acceptance of the buyer with the date and the place of payment of the bill.

When a bill of merchandise is sold the person who sells it sends a trade acceptance with the invoice. This acceptance is

TRADE ACCEPTANCE

No.....191.... STAMFORD, CONN.,.....191.... $.....

..... after.....pay to the order of OURSELVES

..... Dollars.

The obligation of the acceptor hereof arises out of the purchase of goods from the drawer, maturity being in conformity with original terms of purchase. The drawee may accept this bill payable at any bank, trust company or banker's office in the United States which he may designate.

ACCEPTED

(Date accepted) (Designate bank or place of payment) (Signature of Acceptor)

To .....

.....

Due .....Date .....Payable at .....Location of Bank .....Signature .....

made out for the net amount of the merchandise, and also states the date of maturity. The buyer, unless he wishes to send a check, accepts the trade acceptance by writing across the face the date of acceptance, place where it will be paid at date of maturity, signing his name and address and returning it to the person from whom he bought the goods.

When the person who sold the goods receives the acceptance he may retain it until the date of maturity or he may discount it

at his bank exactly the same as he would if it were a promissory note.

In this case Clare Conroy sold $45.00 worth of merchandise on account to J. C. W. Burch. The purchaser Burch accepted this trade acceptance and made it payable at the Albany Commercial Bank on June 21, 1918, by writing across the face of the acceptance:

Accepted Payable at
Albany Commercial Bank
June 21, 1921
(signed) J. C. W. Burch.

After writing the above across the face of the trade acceptance he returned it to the person who sold him the goods, Clare Conroy, who then canceled the account, and in place of the account he entered the $45.00 in an acceptances receivable account.

Before business houses began to use the trade acceptance they carried accounts sometimes for very long terms on their books. While a concern was carrying an account of merchandise sold on credit to another company, the latter had the use of the money that they owed the company from whom they purchased the goods on account, while the latter was carrying their account or name only, on their books. This often caused some houses to become almost bankrupt or to give up business, as they were often forced to pay their accounts within 60 days.

Since the introduction of the trade acceptance by the Federal Reserve Banks, companies which sell merchandise on account and receive from their customers a trade acceptance, close their on-account sales into an acceptance-receivable account. They have the privilege of discounting these trade acceptances after they receive them, just the same as they would a promissory note. This gives the company which sells on account, a security for the account and does not lead to so many *bad-debt accounts* as in the old way of selling merchandise.

Concerns using this trade acceptance plan also sign them for

goods they buy from others, giving their creditors trade acceptances. In this case they cancel their accounts with other concerns with a trade acceptance-payable account in place of simply a name account to show to whom they are indebted.

1. Bought $75 merchandise from Henry Smith on account.
   Sold $50 merchandise to George Jones of Albany, N. Y., on account.

George Jones accepted a trade acceptance for $50, payable in 10 days at the Corn Exchange Bank, Albany, N. Y., thus canceling his account.

The McGill Company accepted a trade acceptance for the $75 from Henry Smith for merchandise bought from him on account, payable at the Irving National Bank, New York, in 15 days.

George Jones paid his trade acceptance of $50.

The McGill Company paid trade acceptance for $75 to Henry Smith.

Merchandise	
Purchase 75	Sales 50

George Jones	
He owes on a/c 50	Cancels by Tr. Ac. 50

Henry Smith	
We cancel by Tr. Ac. 75	We owe him on a/c 75

Cash	
Rec. Jones 50	Paid Smith 75

Acceptance Payable	
75 The McGill Co. paid the above amount to Smith and received the Trade Acceptance marked PAID as a receipt.	75 They gave Smith a signed Trade Acceptance for the merchandise they bought on account from him.

Acceptance Receivable

50 They received a signed Trade Acceptance from Jones for merchandise bought on account from them.	50 Jones paid them cash and they gave him his Trade Acceptance marked PAID by them as his receipt.

Whenever a company sends a trade acceptance with an invoice they send a letter of explanation.

Form of Explanation:

"Attached to the inclosed invoice you will find a trade acceptance which we ask you please to sign and return to us."

A trade acceptance is a written acknowledgment of a purchase on the usual terms and a promise to pay the amount according to the terms. It does not impose upon the purchaser any additional obligation.

The Federal Reserve Bank recognizes this form of trading as the most economical and scientific mode of transacting a credit business, and is recommending and urging its adoption by all wholesale houses.

With this system in general operation one can buy merchandise cheaper, for he can, by this means, buy goods at the lowest cash price and then sell them on a closer margin of profit.

Assignment:

Make out trade acceptances for merchandise sold on account during the month, and when the invoices are sent to customers, send a trade acceptance appended to each invoice. Write a letter stating that the company has decided to accept from each of its customers to whom it sells goods on account, a trade acceptance payable in 30 days. Send the letter to the mimeograph department and have a stencil cut and sufficient copies run off on the mimeograph.

CHAPTER FIVE

Sales and Purchases

Business had its first inception in the home. The customers of the tradesman were his neighbors. Business gradually extended from the home to the immediate neighborhood and then to the towns and the nearby cities. As an example: a shoemaker made shoes for the members of his own family in his own home; later he made shoes for the members of the families in his immediate neighborhood. He had then begun to specialize, he being the shoemaker for the neighborhood, while other neighbors began to specialize in other trades. Later he became known as an excellent shoemaker and he began to make shoes for customers in the nearby towns. As his business increased he bought his leather and supplies in larger quantities, and as his customers did not pay him in advance for his work, he began to buy his leather on account, thereby having creditors or persons to whom he owed money. As years went on this artisan changed his plan of operation from working in his own home as the demand for his shoes increased. He began to desire a larger place in which to work and to obtain other men to assist him in making shoes. This desire for larger facilities for carrying on business led to the hiring of a small store or shop in which he and his workmen carried on the shoemaking business. With increased business facilities his customers and creditors increased. From the small store or shop his business extended until he opened a small factory where machinery and labor-saving devices were used in the making of shoes.

He now had ideal conditions for increasing the output of his product. Through the medium of advertising which was made

possible after the invention of printing, he placed his product before the inhabitants of cities and different sections of his country. When he was making shoes for the families in his immediate neighborhood he was able to record the data of the sales of shoes on slips of paper or by making a memorandum in a note book, or he might even have trusted to his memory. He usually paid cash for his leather or else exchanged something of value with another neighbor, who gave him dried hides or skins.

When he extended his business to include several workmen and hired a small factory he could not continue to memorize the accounts and transactions with his customers and creditors any more than he could now continue to obtain new customers to purchase the output of his factory. He needed assistance both in keeping his account records and in selling his product. These problems led to the hiring of clerical assistants for his office work, and to the development of a sales force to travel throughout the country for the distribution of his manufactured goods. Transportation systems, steam and electricity, and the introduction of machinery and labor-saving devices both in manufacturing and office management became necessary. Salesmen were taught the methods of selling their product to the prospective customers, and were also instructed in the process of manufacture of the article they wished to sell, from the raw material to the finished product.

Managers of salesmen and business executives who directed selling campaigns began to be an important factor in these large manufacturing businesses. Maps of sections visited by members of the sales force were used to check up the routes of the different members of the sales force; comparisons of sales showed the efficiency of the different salesmen; reports by each salesman showed the location of his customers' stores, the amount of business carried on; and his business standing among other men in his community.

Everything connected with the present distribution and

selling of manufactured articles holds the attention of all large business concerns.

Merchandise Sales

Salesmen's Orders

The McGill Company has a number of salesmen on the road obtaining orders for merchandise, which includes groceries, flour, and grain. It receives orders from customers *by mail* and direct *from salesmen*, on which are recorded the necessary data for the files and records. A model of each kind of order follows:

Note: See *Sale of Goods Act*—1893—in Chapter Ten.

(MODEL No. 1)

#43 *Salesman's Order.*

Date.....Sept. 12, 1920.

Salesman.....Henry Bracken

To Whom Sold.....McNulty & Bros., Frankfort, Kentucky

Terms.....On account

How delivered.....Via American Express

Remarks.....3% Discount. Inclosed is their interest-bearing note, $1000, to apply on account. Balance subject to a Sight Draft, or will send check in 10 days.

50 bbls.	N. S. Flour
30 "	Searchlight Flour
5 "	G. Sugar
3 "	Potatoes
3 cases	Quaker Oats
6 half chests	Old Rose Tea
3 mats	Java Coffee
4 bbls.	Apples

(MODEL NO. 2)

Sales Order Sent *by mail*
(Letterhead of Firm on Letter)

Hartford, Conn., Sept. 9, 1920.

The McGill Company.

Please deliver at once:

25 bbl. #45	Potatoes
50 boxes #16	Cloves
10 cases	Hecker's Oats
5 half chests	English Breakfast Tea

We are inclosing our check #75 for $550, to pay the balance on our bill of August 15. You may allow this order of September 9 to remain on account. Please state the terms of discount you will allow us if we send check within ten days, and oblige

Yours truly,
Frederick Mac Kee,
Manager.

As/Mac K

Assignment:

Take the 10 sales slips sent in by the sales force from the envelope containing the commercial papers and record the following facts:

In recording the amount of merchandise sold, estimate 25% less than the current market price for each article sold. Make up a price list.

1. Make out *invoices* on the typewriter or the billing machine (original and carbon copy) for the customers.
2. *File* the carbon copy alphabetically or geographically.
3. Send the *original bill* to the bookkeeping department or outgoing mail department. (Blank invoices are in the commercial papers envelope.)
4. From all the orders received from the salesmen in today's mail, devise a suitable selling price list and enter the extensions (number of articles, times the price per article).

Verify these extensions on the calculating machines. On a 3″ x 5″ card, enter the following data for each customer:

Name of the customer
Address; city, town, and state
Merchandise sold
Total amount of the sale

5. On a 3″ x 5″ card enter the following data for each salesman:

Name of salesman
Date of the sale
Amount of the merchandise sold
Name of the customer to whom this merchandise was sold
Address of the customer

6. File the first cards alphabetically in the card index drawer marked "Customers."

7. File the second cards alphabetically after the guide cards containing each salesman's name. Arrange these cards according to the date of the sale, having the latest date card No. 1, at the front of the filing drawer or cabinet.

(MODEL)

Customer's Card

Name of Customer

Address TOTAL AMOUNT DUE THE FIRM

List of Merchandise and Selling Price

(MODEL)

Salesman's Card

Franklin, James—Salesman	Ziegler, Joseph
Nov. 2, 1920	Akron, Ohio
Merchandise Sales $50.75	(Customer)

Local Map of Your Town or City

Using a local map, enter the following data for the use of buyers who may visit the main office and may desire any information as to transportation or places of local interest.

Different colored glass top pins may be used.

In the case of transportation lines, colored thumb-tacks may be used, using a plain color as blue for all local stations, and a bright red thumb-tack for the express or the important stations.

Trace the following on your local map:

The different lines of subway or surface cars, indicating local and express stations.

State transportation lines passing your local railroad station.

Indicate the transportation lines passing the leading hotels. A different color thumb-tack could indicate hotels.

Locate points of interest to visitors in your city or town.

If your town is a manufacturing town, indicate the location of the factory or salesroom of this special industry by placing a small picture or piece of the article manufactured, on the map. Yale and Towne Manufacturing Company could be indicated by placing a Yale Key or a picture of their burglar-proof lock on the point of location of their plant.

Interborough Map of the City of New York, Borough of Manhattan

The Interborough Map of the City of New York may be used in an Office Practice class in this manner:

Trace the different lines of subway, elevated, and surface cars, using different colored yarn for each. State the station at either end of each line. State the important stations on the express line of the Broadway, Seventh Avenue, Lenox, and Lexington Avenue subway lines. Name the transportation lines passing Grand Central Station, Madison Avenue and 42nd Street and the Pennsylvania Station at Seventh Avenue and 33rd Street. Name the nearest transportation line and the station of the subway or the elevated line at the Martha

Washington, the Pennsylvania, the Astor, the Belmont, and the Commodore hotels.

Salesmen's Daily Report to the Home Office While En Route

Some companies require each of their salesmen while en route throughout the United States to send a daily report to the main office, in order to give full credit to each of the salesmen for the goods sold, in recording records in the Bonus Department, and to know the total merchandise sales.

Reports are sent on a form similar to that given below:

THE McGILL COMPANY

Salesman's Daily Report

Date:

Salesman:

Towns or Cities visited	Population	State	Sales made by Mr.	
			Cash Sales	Sales on Account
1—				
2—				
3—				

Name of Dealer visited	Street Address	Town or City	Credit standing of this dealer in the Dun and Bradstreet Business Directories
1—			
2—			
3—			

Daily Sales

Use the Clerk's Daily Sales Sheets to check sales.

Verify the work on the Listing or Non-Listing Machines.

On a master sheet called the Sales Sheet, the daily sales of several saleswomen have been listed. The total sales of the

saleswomen for the week, or the total sales for each day of the week, may be found from this sheet.

Assignment:

1. Find the total sales for each day, by vertical addition.
2. Find the total sales for the week.
3. Find the total sales of each saleswoman for the week by horizontal addition.

A record of this is kept by some houses that allow a premium for all sales made over a certain amount or over the average sales of that person. They also keep a record of sales by individual salespeople as a test of the efficiency of the sales force of the company.

Add horizontally and vertically in order to verify the correctness of the amount of sales in the following:

Sales Sheet

Daily Sales for the Week Ended December 10, 1921.

Name	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Total per Week
Anderson, J.	135.65	87.65	156.78	85.46	73.56	134.56	?
Bracken, Mary	45.76	198.67	45.90	123.78	1356.00	56.89	?
Carney, Anna	234.78	78.09	256.78	89.45	780.67	355.78	?
Darrow, Jennie	89.67	245.78	99.70	45.00	67.90	250.68	?
Farrell, Alice	145.50	88.34	190.00	345.78	256.00	78.00	?
Fallon, Kate	76.00	95.45	78.45	87.34	99.75	145.23	?
Harris, Lilly	234.56	78.45	2345.90	167.45	780.40	347.89	?
Jenkins, Rose	98.76	9.60	456.79	89.57	345.79	568.90	?
McMahon, Nellie	87.56	58.70	87.45	245.78	88.80	465.78	?
Richards, Helen	456.78	67.90	67.45	567.80	199.75	234.00	?
	?	?	?	?	?	?	?

Note: In order to make out this master Sales Sheet, the individual sales slips are alphabetized daily, and the total of the individual sales and the total sales are obtained by addition on an adding machine. The sales of any department may be obtained in a similar way. Alphabetize the sales slips from each department and then arrange the total slips according to the desired department, and add on any machine.

Merchandise Purchases

In the bookkeeping classes all the merchandise purchases are entered in either the purchase book or are pasted in an invoice book after they have been checked by the receiving department.

Purchases are not to be entered in the purchase book. File all invoices. This method is better as the invoices may be arranged for filing either alphabetically, numerically, or geographically, and in this way may be referred to quickly. Instead of entering invoices in the purchase book, make out a 3″ x 5″ index card. Keep all the necessary data on these cards as these may be referred to quickly and the total purchases found as in our purchase book.

After the receiving department of the concern has checked and marked O. K. the items on the merchandise-purchase invoices which have been received from the people to whom we owe money for merchandise which we have purchased from them on account, we must verify the extensions on the calculating machine. The extensions are the cost per article which is always written or extended into the money column.

In order to verify the extensions it will be necessary to multiply the cost of an item by the number of items purchased, as 254 barrels of flour at $9.85 a barrel, extension $2501.90.

After the extensions are verified, *add* the cost of each item purchased, to find the *total purchases*. This will verify the merchandise-purchase account in the general ledger, or it will verify the invoice book in the accounting department.

If the invoices are filed alphabetically use the method for alphabetizing and then file them in the alphabetic file for invoices, using an individual folder for each creditor.

If they are filed numerically consult the alphabetic card index, and in the upper left hand corner you will find the file number on each creditor's card. Enter this file number in the upper right hand corner of each invoice and draw a circle in

red pencil around the number, making it easier for the file clerk to file.

If they are filed geographically, arrange them according to state, city, or town. The invoices from each city, town, or district are filed back of the guide card bearing the name of the state in which the city or town is located.

In filing these invoices always have the latest date toward the front of the folder, as everything should be filed with the latest date at the top for easy reference.

At the beginning of business hours of each day obtain from the bookkeeper all the invoices of the previous day.

Obtain index cards, 3″ x 5″, from the supply department similar to the ones used in the desk tickler box. After a set of cards has been made out always examine the cards and then make out new cards for new creditors, and make all future entries on the cards in the invoice card index. Refer to the list of creditors for the numbers (for filing). Enter the necessary data on the cards from all merchandise purchase invoices.

(MODEL CARD)

No. 45

McClurg, A. C. & Co.
215 Wabash Avenue
Chicago, Ill.

Invoice of March 2, 1920... Gross amount due.....

Terms..... Less Discount.....

Due Date..... Net Amount Due.....

Paid in Cash or by Check on.....

These cards may be filed either numerically or alphabetically. As illustrated, *McClurg, A. C. & Co.*, will always have the numeric file number of 45, and all their invoices will be filed behind the numeric guide card #45, while the invoices in the folder will be arranged according to the date of the invoice, the latest at the front of the folder.

These cards may also be placed in the follow-up file between the date of the month on which the invoice falls due, and the date on which we wish to pay it in order to receive a merchandise discount. After the invoice has been paid it may be transferred from these files to a transfer drawer or box for future reference.

Assignment:

1. Make out a card for every *new* creditor. Enter the necessary data on the cards for the regular customers from all invoices received to-day. (See invoices received from creditors in the envelope containing commercial papers.)

2. File each card in the follow-up file. After they are paid, transfer them to the transfer file, alphabetically.

3. If paid within 10 days make out a check, and the necessary data on the stub of the check.

4. Take the merchandise purchases from the commercial papers envelope and file them alphabetically in your vertical filing cabinet.

Note: For Bill of Lading, Warehouse Receipt and Freight Bill read Section Seven in *Office Training for Stenographers*, by Rupert P. SoRelle.

CHAPTER SIX

The Telephone

The speaking telephone was born June 2, 1875, in the attic rooms of the Williams Building, 106 Court Street, Boston, Massachusetts. Alexander Graham Bell, and his assistant, Thomas Watson, were experimenting and testing some modifications of Bell's harmonic telegraph, a device by means of which, utilizing the laws of sympathetic vibrations, Dr. Bell expected to send six or eight Morse messages on a single wire at the same time, without interference. The essential parts of both transmitter and receiver, of this telegraph, were an electric magnet and a flattened piece of clock spring. The spring was clamped by one end to one pole of the magnet, and had its other end free to vibrate over the other pole. The transmitter had, besides this, make-and-break points like an ordinary vibrating bell which, when the current was on, kept the spring vibrating in a sort of nasal whine, of a pitch corresponding to the pitch of the spring. When the signalling key was closed, an electrical copy of that whine passed through the wire and the distant receiver.

On this particular day Mr. Watson had charge of the transmitting ends, and Dr. Bell, in the other room, was retuning the receiver springs one by one. What happened on that memorable afternoon is best described in Mr. Watson's own words:

"One of the receiver springs I was attending to stopped vibrating and I plucked it to start it again. It didn't start and I kept on plucking it, when suddenly I heard a shout from Bell in the next room, and then out he came with a rush, demanding, 'What did you do then? Don't change anything. Let me see!' I showed him. It was very

These cards m
the date of
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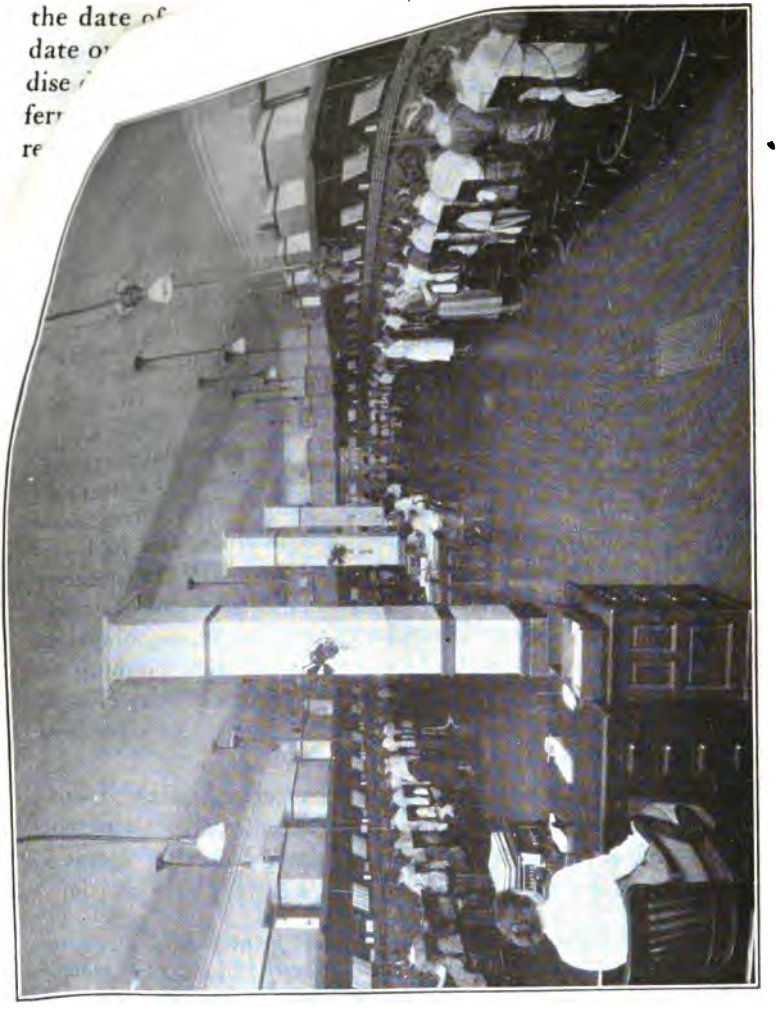
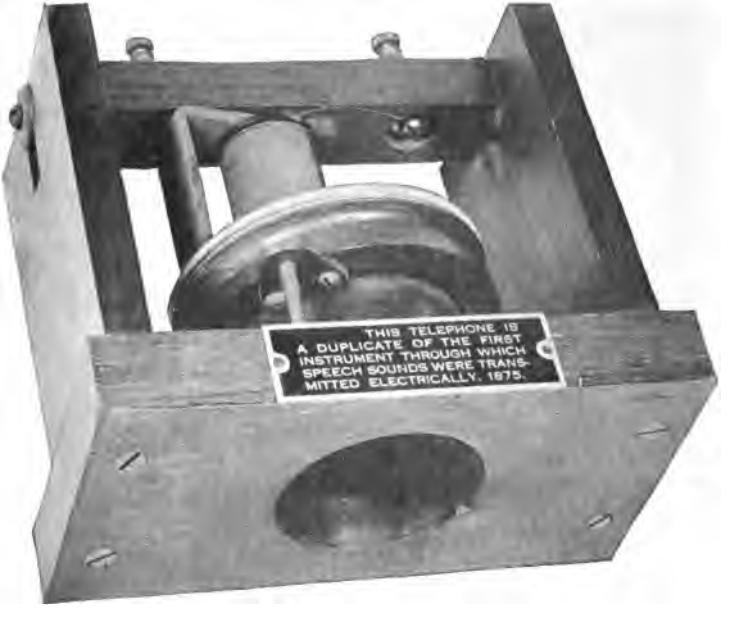


CENTRAL TELEPHONE EXCHANGE

simple. The make-and-break points of the transmitter spring I was trying to start had become welded together, so that when I snapped the spring the circuit had remained unbroken while that strip of magnetized steel by its vibration over the pole of its magnet, was generating that marvelous conception of Bell's—a current of electricity that varied in intensity precisely as the air was varying in density within hearing distance of that spring. That undulatory current had passed through the connecting wire to the distant receiver which, fortunately, was a mechanism that could transform that current back into an extremely faint echo of the sound of the vibrating spring that had generated it, but what was still more fortunate, the right man had that mechanism at his ear during that fleeting moment, and instantly recognized the transcendent importance of that faint sound thus electrically transmitted. The shout I heard and his excited rush into my room were the result of that recognition. The speaking telephone was born at that moment. Bell knew perfectly well that the mechanism that could transmit all the complex vibrations of one sound could do the same for any sound, even that of speech. That experiment showed him that the complex apparatus he had thought would be needed to accomplish that long-dreamed result was not at all necessary, for here was an extremely simple mechanism operating in a perfectly obvious way, that could do it perfectly. All the experimenting that followed that discovery up to the time the telephone was put into practical use was largely a matter of working out the details. We spent a few hours verifying the discovery, repeating it with all the differently tuned springs we had, and before we parted that night Bell gave me directions for making the first electric-speaking telephone. I was to mount a small drumhead of gold beater's skin over one of the receivers, join the center of the drumhead to the free end of the receiver spring and arrange a mouthpiece over the drumhead to talk into. His idea was to force the steel spring to follow the vocal vibrations and generate a current of electricity that would vary in intensity as the air varies in density during the utterance of speech sounds."

Mr. Watson followed these directions, and the instrument was ready for trial the very next day. It was but few days later that Watson heard the familiar voice of Dr. Bell come over the wires which were connected to his work-bench on the third floor of the Williams' shop, saying: "Mr. Watson, please come here, I want you."

The introduction of the telephone into the business and social life of the nation was a difficult task. At first the public was skeptical, but gradually the more progressive business men began to see the practicability of a device such as the telephone,



FIRST TELEPHONE

so that by May, 1877, the first telephone switchboard was installed in the office of E. T. Holmes, in Boston, connecting with five banks. In the fall of 1877 the first real telephone exchange was established in Bridgeport, Connecticut, and New York City saw its first telephone company organized on August 31st, 1877.

On the morning of August 5th, 1877, the New York "Sun" surprised its readers with the news that "there are five telephones in practical working order in New York City." These telephones were:

From Charles A. Cheever's office in the Tribune Building to:

1. The Champion Burglar Alarm Company, 704 Broadway,
2. The Law Telegraph Office, 140 Fulton Street,
3. Dickerson & Beaman, Lawyers, Staatz-Zeitung Building,
4. S. J. Burrell, a maker of telegraph supplies, located on Broad Street, and
5. From J. L. Haight's office at 81 John Street to his wire plant at South Brooklyn.

None of these was a paid-for line, except the last.

In New York City to-day there are 900,000 telephones operated through 100 exchanges.

There are more telephones in New York City than in any two other cities in the United States combined.

Instead of a few miles of wire, as there were in 1877, there are now over 5,500,000 miles of wire in the telephone system in New York City.

The employees of the New York Telephone Company in New York City total approximately 30,000.

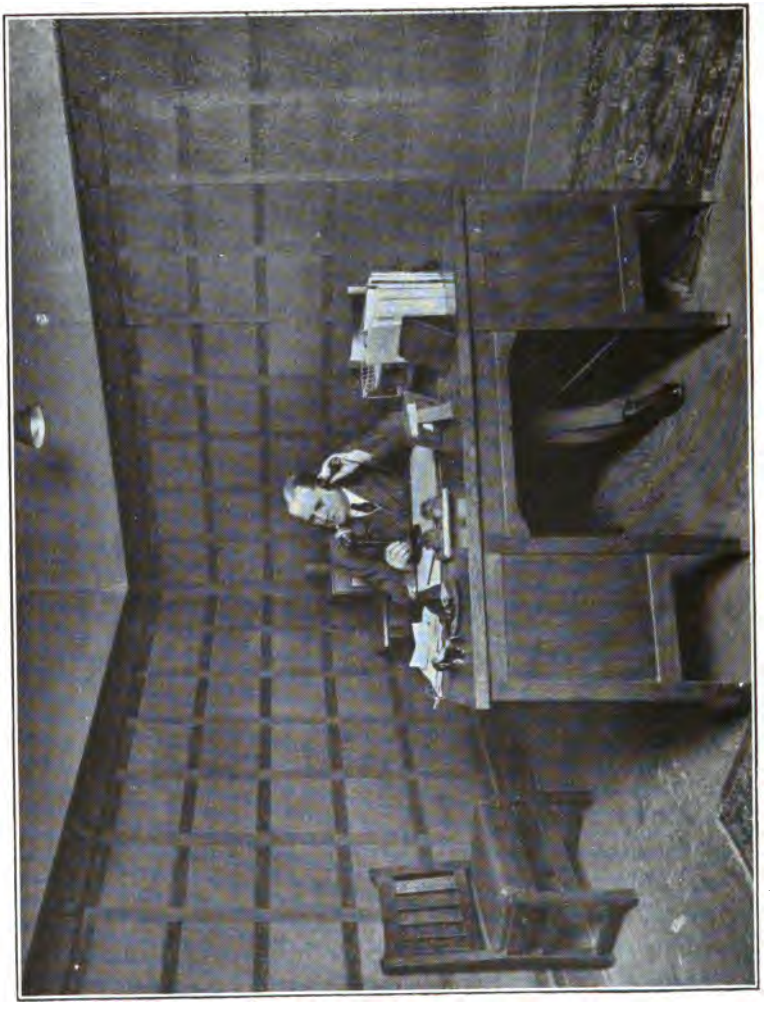
The telephone-using public make over four and a quarter million local calls daily.

How to Use the Telephone

The assignment of answering the telephone in a busy office usually devolves upon the typist or the stenographer. To fill this position efficiently the necessary requirements are good manners, a quiet, clear, distinct speaking voice, and the ability to use correct English and pronunciation when talking over the telephone.

Every time one telephones he unconsciously reveals his character and the character of the company with which he is connected. First impressions are often very lasting. The way one answers a telephone call shows the other person what kind of service he may expect from that individual or company. When at the telephone you are your firm; its reputation is in your keeping.

Before making a call always consult the telephone directory



MAN TELEPHONING

to make sure to call the right number; if the number is not in that book ask for "Information."

Speak clearly and distinctly directly into the transmitter, holding your mouth about one inch distant from it.

As a means of demonstration, use small toy telephones similar to those sold in the 5 and 10 cent stores or any toy shop. One student representing the central office will stand at the rear of the room. The student representing the office of The McGill Company will stand at the right-front end of the room, and the student representing the office either calling us or the office we are calling, will stand at the opposite left-front side of the room. If a school has a dummy switchboard installed for the use of the students in the office practice class, the switchboard may represent the central office telephone exchange. In this case a desk telephone placed on the filing cabinet at the rear left of the room may indicate the office telephone to be used for the outgoing calls. A desk telephone placed on the filing cabinet at the rear right of the room may indicate "any office" outside of the office-practice classroom, and may be used by the students who desire to send messages to The McGill Company as indicated in the text.

How to Call a Number on the Telephone

When giving a number to the operator state (1) the name of the central office wanted; (2) each figure of the telephone number; (3) the party-line letter, if there is one. Numbers which are even hundreds or even thousands should be given as such instead of each figure being given separately.

SAMPLES:

CAN al	0027	"Canal oh-oh (pause) two–seven."
JOH n	1253	"John one–two (pause) five–three."
MAI n	2125–J	"Main two–one (pause) two five—Party J"
BRO ad	4800	"Broad four–eight–hundred"
WOR th	5000	"Worth five–thousand"

Mr. Harris asks his stenographer to call Mr. Stewart to the telephone.

Let us assume that Miss Green is Mr. Harris' stenographer, and that Miss Blank is the stenographer for Mr. Stewart.

Miss Green upon ascertaining Mr. Stewart's correct telephone number lifts the receiver from the hook. Instantly an electric current passes over the wires to the central office, and causes a light to glow on the switchboard in front of the operator. That light notifies "central" that a call is desired on that particular line. Accordingly she sets up her connection and says, "Number, please?" (using the rising inflection).

Miss Green: "Lenox 5748 (making a slight pause between 57 and 48).

Operator at the central office: "Lenox 57 (pause) 38".
Evidently Miss Green did not speak distinctly as central misunderstood the number.

Miss Green: "No, operator, Lenox 57 (pause) 48."

Operator at the central office: "Beg your pardon, 57 (pause) 48" confirming the call which central always does in making a telephone connection on an incoming call).

Miss Green: "Yes (or right) please." Thus central establishes the telephone connection with the telephone exchange in which Mr. Stewart's telephone is listed, the Lenox Exchange.

While you are waiting for the called number to answer, the intermittent burr-r-ring sound of the ringing signal will indicate that the work of putting up the connection has been performed by the operators concerned.

The switchboard operator of the company in which Mr. Stewart's office is located receives the signal of an incoming call and connects the telephone in his office with the Lenox Exchange.

Miss Blank: "Stewart & Co., Miss Blank speaking."

Miss Green: "This is Harris & Co., Miss Green speaking. Mr. Harris would like to speak with Mr. Stewart, please."

Miss Blank: "Just a minute, please." (Miss Blank then tells Mr. Stewart that Mr. Harris wishes to speak to him over the telephone.)

OFFICE SWITCHBOARD

Voice of Mr. Stewart over the telephone: "Mr. Stewart speaking."

Miss Green: "Just a minute, please." (Miss Green tells Mr. Harris that Mr. Stewart is ready to speak with him over the telephone.)

Voice of Mr. Harris over the telephone: "Mr. Harris speaking." Conversation between Mr. Stewart and Mr. Harris continues. Call completed.

Mr. Harris and Mr. Stewart both hang up their receivers on their respective telephones. If a switchboard is used, the operator in each of the above concerns notices from a signal on her switchboard that both parties have completed their conversation. The switchboard operator then disconnects with the central telephone exchange thereby notifying "central" that the party who called Lenox 5748 has completed his conversation. Where no switchboard is used, "central" receives the same signal when the receiver is replaced on the hook.

Note: The best business practice is to name individuals using the telephone instead of "stenographer," "bookkeeper," "secretary," etc.

Important Points Concerning the General Telephone Directory, the Classified and the Suburban Directory

1. All names are arranged thus:

   Surname, first name, initials, business address, the telephone exchange and telephone number. For example: O'Mara, John A. & Co., Advertising Agency, 225-5th av, MAD Sq.-9850.

2. In the case of a residence telephone the directory indicates this information by inserting a small "r" between the name and address.
3. The titles Mr. Miss, Mrs. and Dr. are printed after the surname. For example, Harrison, John, Dr.
4. All city departments are listed under the title "City of New York." For example, Mayor, Office City Hall, Cortland-1000.

5. Apartment houses are listed under name of Apartment House, or where they have no name are listed under "Number." This is convenient because if one knows the Number of an apartment house, it is easy to find the telephone number listed under "Number." For example, 611 West 141st Street is listed under "Number" and is AUD ubon-6480.
6. All public schools in New York City are listed under "Education, Board of." For example, Julia Richman High School 60 W 13, CHE lsea-4478. The different annexes of this school are listed under the name of the Main Building. For example, Annex PS 9 225 W 82 St, SCH uyler-8437.
7. Branches of businesses are listed in the same manner.
8. Hospitals are listed under "Hospitals" and in addition may be found under the name of the particular hospital, as St. Vincent's Hosp., 7th av & 11, CHEL sea-4050.
9. Names beginning with "Mac," "Mc.," "O" and "Saint (St.)" are listed in strict alphabetical order.
10. The Telephone Company issues two kinds of directories New York City and Suburban. A Classified Telephone Directory is also issued, but this directory is published by the Reuben H. Donnelly Corporation with the authority and cooperation of the New York Telephone Company.

    1. The New York City Directory contains:
       A. (1) Advertisers listed before the names of subscribers.
          (2) General information about the use of Long Distance Tolls.
       B. An alphabetical list of telephone subscribers, businesses, addresses, and telephone numbers.
    2. The Suburban Directory contains lists of subscribers in near-by towns, alphabetically arranged for each particular locality in the same manner as applied in the City Telephone Directory.

3. **The Classified Directory contains an alphabetical list of all classes of business subscribers in the city and a list of companies, with the businesses, address, and the telephone number.**

Local calls are charged at the rate of five cents, and the speaking period is assumed to cover a conversation of five minutes' duration. In cases where long conversation are continually held over any one particular line, the Company reserves the right to charge overtime on such calls.

Suburban calls are charged on the basis of five minutes with an additional charge for overtime.

Long distance calls have a minimum charge of three minutes and an additional charge for each minute thereafter.

To facilitate sending telegrams and cablegrams, telephone users should call by name for the Western Union Telegraph Company or the Postal Telegraph Cable Company.

The Telephone Company issues new directories every February, May and October. The old directories are taken up by the Company at the time of the delivery of the new books.

An emergency call may be made as follows: Call the central office and say:

"I want to report a fire."
"I want a policeman."
"I want an ambulance."

If compelled to leave the telephone before central or the station answers, tell the operator where help is required. No charge is made for such calls.

Special Information Concerning the Use of the New York City Telephone Directory

You will immediately notice two striking changes in the style of printing the listings in this book.

The first three letters of all central office designations (except those in Staten Island) have been capitalized in black Gothic

type and separated from the rest of the name by a small space. Example, Wadsworth is printed WAD sworth.

All the line numbers which were below 1000 in the last directory have been changed by prefixing enough zeros to build each number up to four digits. Example, Melrose 19 is printed MEL rose-0019; Prospect 178 is printed PRO spect-0178.

These changes were necessary in preparation for the introduction of machine switching central office apparatus in New York City. In the near future subscribers in certain exchange areas may be provided with instruments equipped with dials for use in making local calls by the machine switching method. These subscribers will be able to make all local telephone calls without the aid of an operator. They will dial the first three letters of the central office name and a number with at least four numerals. It is for the benefit of the subscribers who will use the new equipment that the style of printing the Telephone Directory has been changed.

The three letters which must be dialed are made to stand out clearly from the rest of the central office name so that it will be easy to determine just what letters to dial.

In calling with the new machine switching apparatus, the subscriber will dial the first three letters of the called central office name and the number which must consist of at least four numerals. That is why all line numbers which were composed of less than four digits (numbers below 1000) had to be built up to four digits by prefixing the initial zeros.

As long as you continue to be served with the manual type of instrument such as you now have, you should pay no attention to the new style of printing central office names in the Telephone Directory. For example, the fact that Wadsworth is printed WAD sworth makes no difference in the pronunciation of the word. In giving numbers to the operator you should continue to pronounce central office names in full as you do now.

Zeros that have been added to line numbers formerly con-

taining less than four digits must be given as part of the new numbers but not as "zero." As heretofore, zeros will be pronounced "oh." If you wish to call WAD sworth-0078, for example, you will say "Wadsworth oh-oh (pause) seven-eight."

If your telephone number has been changed by the introduction of one or more initial zeros be sure to include the zeros as part of your number when giving it to an operator or to any other person.

Subscribers who will be served by the machine switching system will be given individual instructions in the use of the equipment before the new system is placed in service.

Assignment on the Use of the Telephone, and Looking Up Telephone Numbers in the Telephone Directory:

1. Call the National Bank Safe Deposit Company of your city and arrange for renting a safe deposit box for The McGill Company.

Note: Numbers containing three ciphers are read as thousands. For example: Murray Hill-8000—eight thousand; Murray Hill-5100—five-one hundred.

2. I want to telephone to Mrs. Harris who lives in the apartment house at 611 West 141st Street. I have forgotten the number of her telephone. Where shall I look in the general telephone directory to find it?
3. The telephone number of the Underwood Typewriter Company, repair department, is Barclay-8900. Explain how to call this number and ask that a repair man be sent to The McGill Company to repair the Underwood typewriters in Room 509.
4. Look up the telephone number of the Julia Richman High School.
5. An accident has just occurred across the street. Send in an emergency call to the nearest telephone exchange.

6. Send out circular letters to retail dealers who are interested in flour, grain, and fruit. How will the telephone directory assist you in compiling the mailing list?
7. Call the leading advertising agent of your city and tell the manager that The McGill Company wishes to arrange for advertising in the middle-west newspapers.
8. Call the National Biscuit Company, General Offices, Sales Agency. Tell the manager we desire an interview with one of their salesmen.
9. Get the information bureau at your local railroad on the telephone. Ask when the express for Chicago leaves and reserve a Pullman seat for Mr. Smith.
10. I left an umbrella on the 8.15 express from New Haven, Conn., Saturday morning. Call the lost article department at the local railroad station and make inquiry about a black silk umbrella.
11. The School Magazine is to be issued on Wednesday. Telephone to the publishers and ask for the manager of the printing department, stating that we wish 200 copies sent to the school.
12. Make out a memorandum of the names, business addresses, and the telephone numbers of ten men in your city who are in the following businesses:

    Advertising, Grocers, Fruit Dealers, Plumbers, Accountants, Architects, Attorneys, Bankers, Detective Agents, Managers of Hotels, Dealers in Automobile Accessories and Supplies, Chemists, and Dealers in Electrical Supplies. (Use the Classified Directory.)

13. Call the Mayor of your city on the telephone and invite him to make an address at the assembly in your school on a patriotic subject.
14. Telephone to the office of the Superintendent of Schools and ask why the textbooks ordered last month have not been delivered at your school
15. Call the President of the Board of Health on the tele-

phone. Invite him to address the assembly in your school on the subject of Hygiene.

16. Make a memorandum of the telephone number and the address of the manager of your local theater, five members of the local fire department, ten members of the local police department, and four well-known doctors and five lawyers.
17. We received word from one of our creditors that merchandise ordered from them had been shipped to us by parcel post. Call the local postmaster on the telephone and make inquiry, as we have not received the merchandise.
18. Get the manager of the local Victor Talking Machine Company firm on the telephone. We want a repair man to examine the mechanism of our school Victrola.
19. Telephone the editor of your local newspaper and ask him to send a man to report the debate which is to be held at the school on Friday evening between the Senior and Junior Debating Societies.
20. Call the leading grocer of your city, ask for the manager. Make an appointment with him for our salesman to call at 3 P.M., or at any hour that is convenient to the manager. Make a note on a small sheet of paper of the hour of the appointment, and place the memorandum on the desk of the chief clerk.
21. Get the Western Union Telegraph on the telephone and ask them to send a messenger to your school.
22. Look up the telephone number of the tax collector. Make an appointment for him to call me up as I wish to speak with him in reference to my tax bill.
23. Call the bureau of information at the local railroad station, and find out if the 8.10 express has a through sleeper to Boston, Massachusetts.
24. Telephone the local railroad station and inquire when the next express leaves for Washington, D. C. Have a

lower berth reserved for our salesman. Find out the time of the arrival of the express at Washington; get the number of the car and make a note of the information and place it on the desk of the chief clerk.

25. Telephone the American Express Company to call immediately for a package which you wish to send to Chicago.
26. Ask the local printing office to quote prices on 2000 letterheads printed on Bond paper, size 8½"x11", for immediate delivery.
27. We are anxious to know if the site we are considering for our factory has a clear title. We shall place the searching of this title in the hands of the best law firm in your city. Telephone one of the members of a well-known legal firm and make inquiry concerning the subject in question.
28. We shipped a package of merchandise to Mr. Martin O'Connell at Chicago by the American Express Company. There has been a delay in the delivery. Call the express office and make inquiry. Make a memorandum of the result of your conversation with the express company and place it on the desk of the chief clerk.
29. We have reserved a room in the Hotel Dennis for one of our salesmen who was obliged to change his plans. Telephone the hotel at Atlantic City and cancel this reservation.
30. Miss A., one of our stenographers, had a book reserved at the Public Library. She received a notice stating the reservation will expire at 5 P.M. Telephone the Library and ask the Librarian to reserve the book until 5.30, when Miss A. will call for it.

Reference Books

Different business houses require different varieties of books of reference. Law firms generally have a large library of law books, while nearly all companies have directories and general

reference books. If the stenographer desires to find the meaning of a word, the correct spelling, or the division of a word into syllables, he consults a dictionary. A buyer would likewise consult a classified directory or buyer's guide, as all business houses are listed under a heading describing their specialty. A large mail order house will have directories of cities and towns in the different sections of the United States as they give an alphabetic list of every resident, a map of the town, and a list of the officials. This data may be used in making up a mailing list. Social directories contain lists of prominent people, clubs, theater diagrams, and other miscellaneous information. Business magazines, credit rating books, almanacs, year books, postal and shipping guides and telephone directories are in general use in business. Detailed explanation of the telephone directory may be found in the chapter on the telephone.

Credit rating data is furnished in book form by the Bradstreet Company and by R. G. Dun & Company to merchants who subscribe yearly for the service. The subscription also includes special reports on credit rating. The report is in code and states the investment, the estimated worth, the prospects of success in business, and whether the individual or company is slow or prompt in meeting obligations. The special reports contain reports from the bank in which a merchant is a depositor. These credit rating companies have an agent in each town or city who furnishes the necessary data for these reports. Almanacs and atlases usually contain a set of maps indexed by states, beside other valuable commercial information. In fact, all reference books do for the business man what a map does for the traveler.

Previous to the publication of maps of the United States, the geographic knowledge of our country was taught by the old Indian warriors to the young men and the little Indian children by word-of-mouth, as the oldest and the most learned warriors knew the deer paths and the places where it was safe to cross dangerous streams within a few miles of the hunting grounds.

Maps have replaced this system of geographic memory, and today almanacs and atlases contain much encyclopædic information. Business men today need a source of ready reference more than the old Indian warrior needed the knowledge he possessed of a safe path through his hunting grounds. The important point today is not to have the desired information retained accurately in one's memory, but to know where to find the knowledge which one requires.

Who's Who in America

Among the books of general information used for reference in the business world are the well-known *Who's Who in America* and *Who's Who in England.* These books give a brief personal biography of living notable men and women in America and Great Britain. The data generally consists of the date of birth, parents, education, public or prominent positions held, occupation or profession, and, in the case of writers, a list of the titles of books published.

Assignment:

The assistant manager wishes to obtain the following information: Consult *Who's Who in America*—

Theodore Roosevelt:

Where was he born?
Where was the school of his childhood located?
What are the titles of some of the books he wrote?
When was he made Commissioner of Police in the City of New York?
On what date did he become President of the United States?

Note: This information will be found in the 1918–1919 edition of *Who's Who* —not in the later editions.

Woodrow Wilson:

When was he elected President of the United States for the first time? For the second time?
State the date of his election as Governor of New Jersey.
When was he installed as President of Princeton University?
State any interesting events which took place during his administration as President of the United States.

OFFICE PRACTICE

Warren G. Harding:

[illegible] held before his nomination for Pr[illegible]
[illegible] President of the United States:
[illegible] which have taken place during [illegible]

[illegible]

21

22

23.

24.

ılth officer, milk and food inspector, building inspector, chief police, and chief of the fire department.

Donnelly's Red Book, or the National Buyers' Guide and les Catalogue, is published in the states of California, Con- cticut, Georgia, Illinois, Massachusetts, Michigan, Minne- :a, Missouri, New York, Ohio, Pennsylvania, and Wisconsin. ıe geographical section lists companies *geographically*, by ıte, town, or city, and *alphabetically* by material, products, d services. If one living near Detroit wishes to communicate th an Addressing Machine Manufacturing concern in order install a mechanical mailing device, he will first find the classi- :ation *MICHIGAN* in large black type; under Michigan he ıll find *DETROIT* alphabetically arranged; and then alpha- :tically he will find *Machines. Addressing Mfgs.* Beneath is he will find the names, addresses, and the telephone num- :rs of all houses manufacturing addressing machines.

ssignment:

Using your city or town directory, find the following:

. The name of the mayor of your city; locate his office and his residence.
:. The name of the city treasurer and of the comptroller.
3. Locate the board of education's office.
4. Find the name and the address of the city superintendent of schools.
5. Find the name and the address of the principal of your high school.
6. Locate the address of the office of the board of health.
7. Find the name and the address of the health officer of your city.
8. Find the names and locate the offices and the residences of the members of the medical staff of your city hospital.
9. Look up the name and the residences of ten nurses in your city.
0. Locate the principal fire department of your city.
1. Name the chief of each fire company, stating his residence and his office.
2. Look up the following names in your city directory. Make a list of the names, the address, and the position of each person:

a The chief customs official.
b The manager of your local theater.
c Ten members of the local police force.
d Ten members of the local fire department.
e Ten members of the common council or the law-making body of your city.
f The postmaster and the assistant postmaster.
g The letter carriers in your neighborhood.
h The tax collector of your city.
i The members of the board of assessors or the men who levy the tax rate in your city.
j Twenty-five teachers in your school.
k Ten lawyers, dry goods merchants, druggists, butchers, manufacturers, phonograph dealers, and grocers.
l The editor of your local newspaper and the reporters.
m The librarian of the local library and her assistants.
n The manager of the telephone exchange.
o The manager of the telegraph office.
p The ticket agent at your local railroad station.
q The leading real estate agents of your city.

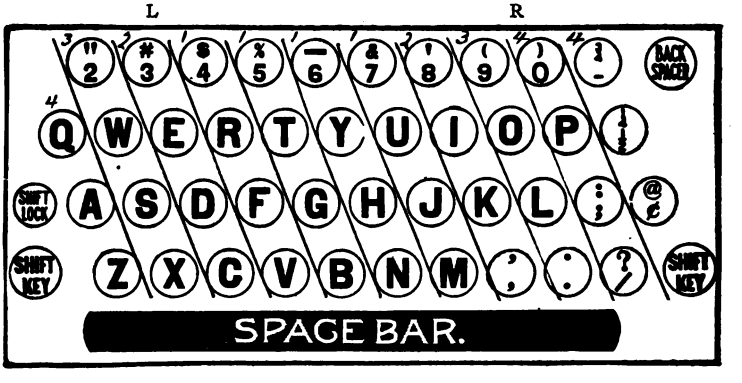
CHAPTER SEVEN

The Typewriter

The business world today owes much of its efficiency to the invention of the typewriter. But for its invention business letters would still be written in longhand by expert penmen; carbon copies of outgoing mail could not be filed for future reference; bookkeeping machines would be unknown, as they use the keyboard of the modern typewriter; and the adding and calculating machines with a typewriter keyboard would be impossible. All these owe their existence to "The Father of the Typewriter," Christopher Lathan Sholes, who was born in 1819 and died in 1890, but had lived to see his invention used in practically every office throughout the world, and the old-fashioned pen, ink, and paper method become a thing of the past in modern business correspondence. To his patience in perfecting the mechanism of the first typewriter is due in a large measure the efficiency of every business office today.

The letters above the key on the keyboard indicate which hand is to be used to operate these keys. R indicating the right hand, L the left hand, the figures 1, 2, 3, 4, which finger is to be used to strike the key. The figure 1 under R means that the keys u, j, m, and y, h, n are to be operated with the first finger of the right hand, and the figure 1 under L means that the keys r, f, v, and t, g, b are to be operated with the first finger of the left hand. The figure 2 under R means that the keys i, k, comma, are to be operated with the second finger of the right hand. The figure 2 under L means that the keys e, d, c, are to be operated with the second finger of the left hand. The figure 3 under R

means that the keys o, l, period, are to be operated with the third finger of the right hand. The figure 3 under L means that the keys w, s, and x are to be operated with the third finger of the left hand. The figure 4 under R means that the keys p, :, /, are to be operated with the fourth finger of the right



hand. The figure 4 under L means that the keys q, a, z, are to be operated with the fourth finger of the left hand. To capitalize any letter of the alphabet or to write the characters ", #, $, %, —, &, ', (,), * the shift key must be depressed, and held down while the proper key is operated. The left shift key should be used to operate any key on the right side of the keyboard while the right shift key should be used to operate any key on the left side of the keyboard.

Note: The Typewriter companies issue a book of instructions in which all parts of the machine are fully explained and illustrated.

The following directions are taken from *RATIONAL TYPEWRITING*—Medal of Honor Edition—by Rupert P. SoRelle:

Position at Machine

Assume a comfortable position directly in front of the machine. Adjust your chair so that when you are seated your

POSITION AT THE MACHINE

arms *hang naturally at your side.* The seat should be lowered so that the elbows are on a level with the top of the table, and the forearms parallel with the slant of the keyboard. Sit erect and place your feet squarely on the floor. Do not "slouch" down over the keyboard. Any movement of the body backward or forward should be made by using the hips as a hinge. The position at the machine is of the utmost importance.

Place the hands over the keyboard with the little (fourth) fingers very lightly on the keys ";" and "a." The fourth fingers should be kept hovering over these keys all the time when not striking other letters, and the position of the other keys, in the beginning lessons, located from these points. Adjust your chair that you may sit in a comfortable position, with your back resting against the back of the chair. The fingers curve gracefully toward the keys. The keys are struck with the *ball of the finger.* The sight should be directed constantly *toward the copy.* It is seldom necessary to look at the machine, and it should never be necessary to look at the keyboard.

How to Begin

Place the hands over the keyboard, with the little fingers resting on the *guide keys* ("a" and ";"), and the third, second, and first fingers resting on the next three keys toward the middle of the keyboard on the same row. Practice placing the hands on the keyboard in this way and removing them repeatedly until the movements can be accomplished accurately without looking at the keyboard. With the hands placed on the keyboard in this manner, the first finger of the right hand will then be resting over "j" and the left first finger over "f." With these points fixed in mind, you can easily get the location of the other letters of the central division by consulting the chart. A little practice will enable you to locate "j" and "f" positively and quickly by merely placing the hands in position. After you have established the "feel" of the "j" and "f" positions, it will be well to practice the touch on these keys, striking first

"j" and then "f" with a firm, staccato touch, *lifting the finger immediately.* Practice these movements until you can strike the keys accurately and with an even touch.

The next step is to learn to make the reach to "h" and "g," and to strike these keys with an even touch. Practice a few lines of the letters "jhfg" until you have the positions well fixed and can strike the keys firmly in the center. Then attack the upper row of keys, beginning with "u," which as you will see by the chart, is directly above "j." Practice passing from "j" to "u" a few times until you accustom yourself to the distance. Go slowly, deliberately. Make sure of your ground at each step by analyzing the movements. Next practice moving from "u" to "y," then write the letters "juy" a few times. Then practice moving directly from "j" to "y."

Proceed with the left-hand division in the same way, starting with "f" and working to "r" and "t," and so on. The bottom row of keys should then be learned in the same way. Afterwards practice a few lines of the different keys in vertical rows—"ujm," "yhn," "rfv," "tgb." Then, to test your accuracy in judging distance, try passing from the lower row to the upper, and vice versa, writing "mu," "ny," "vr," "bt."

Practice two lines of each vertical row of keys, thus: ujm, yhn, mju, nhy, rfv, tgb, vfr, bgt.

All of these exercises should be practiced by *touch.* Keep your eyes fixed on the chart and not on the keyboard of the machine. You should now be ready for the formal work of the first lesson. The same method may be applied to learning the location of letters in the other divisions.

Follow closely the fingering given on the charts; each finger must be confined strictly to its own territory. In this lesson all of the writing, it will be noted, is done with the first fingers.

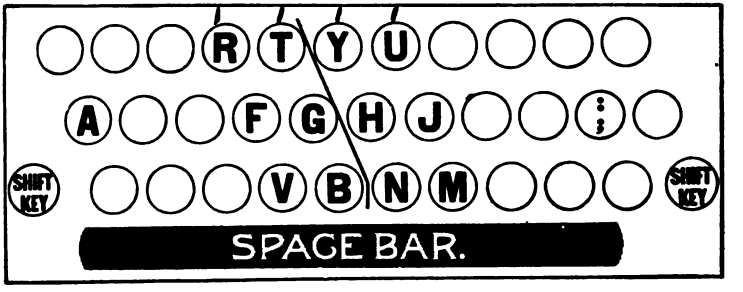
Make a complete copy of each exercise before starting another, even though you make some mistakes. Each exercise is planned to give a definite training. In order to get this training

it is necessary to write all of the exercise each time you attempt it. Do not be satisfied with merely writing the exercise once, but repeat it until a complete mastery of the movements and the location of the keys is established.

Inspect your writing at the end of each line in the first two or three lessons, so that you may note any unevenness of touch and correct it in the next line. After you have made sure that your touch is correct, discontinue inspecting the writing.

Do not attempt to correct misprinted letters until you get your fingers under control. Naturally, you will strike the wrong letter occasionally. The work of this lesson is not complete, however, until you *make a correct copy by touch.*

Note: All keys are struck with the *FIRST* finger.



First Exercise

Practice the following combinations until the location of each key is memorized:

jhfg fgjh jhfg fgjh jhfg fgjh jhfg fgjh jhfg fgjh jhfg fgjh jhfg fgjh
jfhg fjgh jfhg fjgh jfhg fjgh jfhg fjgh jfhg fjgh jfhg fjgh jfhg fjgh

juyj frtf kuyj frtf juyj frtf juyj frtf juyj frtf juyj frtf juyj frtf
jmnj fvbf jmnj fvbf jmnj fvbf jmnj fvbf jmnj fvbf jmnj fvbf jmnj fbvf

Second Exercise

Repeat each line of the exercise until rhythm and speed are secured.

jug jug jug jug jug jug jug jug jug jug jug jug jug jug jug jug jug jug

but but but but but but but but but but but but but but but but but but

buy buy buy buy buy buy buy buy buy buy buy buy buy buy buy buy

thumb thumb thumb thumb thumb thumb thumb thumb thumb thumb

Third Exercise

Repeat each line several times, writing rather deliberately but in rhythm.

jug fur but fun buy turn thumb truth rug gnu urn tub numb untruth thug

jury nut hug bun mug huffy hubbub burn funny murmur grum burr hymn rut

rung nutty hungry brunt hung unhurt turn gunny hurry grub bug tug hunt

gummy turf thrum grub ruff ruby hurt tuft runt unhung numb humbug fury

Words of High Frequency

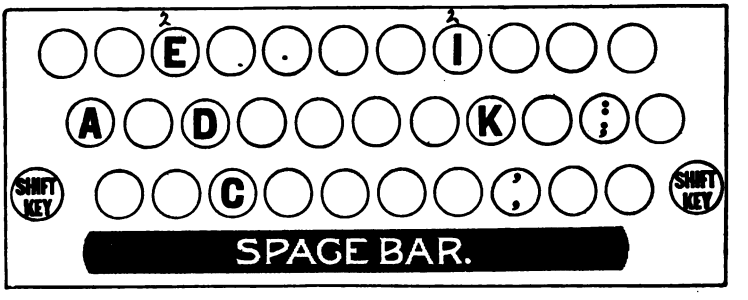
The words of high frequency are to the typist what the word-signs are to the shorthand writer. They make up the larger part of all writing. If the fingering of these is thoroughly mastered and the words can be written without conscious attention, the speed of the writer will be greatly increased. Facility in executing these words will also influence very greatly the speed and rhythm of other words.

After completing Exercises 1, 2, and 3, write two lines of

each word in the list, and repeat until the words can be written smoothly and without effort.

my	but	try	jury
by	buy	turn	truth

Note: All keys are struck with the *SECOND* finger.



Write the following on the keyboard.

First Exercise

Write two lines of each word, starting from home "position" on each.

kick	nine	cite	huge
dice	edit	very	mere

Second Exercise

Repeat the entire exercise five times:

edict eject fight there judge juice chief truce tried trick right bring check erect might every being edify fruit educe cured brute their three thick thing brief civic entry fifty incur merit never under truer river there brick enemy drive entry hinge ridge fiend merry greed thyme crime

Third Exercise

Write each line five times; repeat if time permits:

very much in need very much in need very much in need very much in need

return by freight return by freight return by freight return by freight

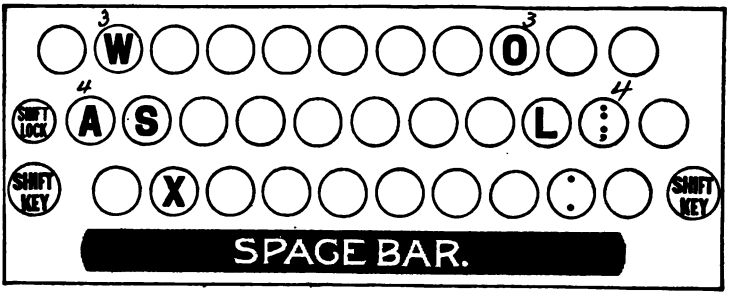
receive the check receive the check receive the check receive the check

Words of High Frequency

Repeat each word until smoothness in operation and even touch are acquired. Start from "home position" each time you write the word.

in	the	ever	given
it	did	here	buyer
me	end	even	regret
if	him	much	three
be	her	time	thing
he	big	they	think

Note: All keys are struck with the *THIRD* finger



First Exercise

Follow instruction of preceding lesson.

lost	wild	oils	list
slow	sold	wise	wish

Second Exercise

Follow instructions given in second lesson on keyboard exercises.

bundle sundry excuse yellow swerve revive little holder exhort summer fellow wisdom vessel motion sister wonder sought window system between extreme thought without sincere refund involve leisure exists shift exercise wrought north resumed grown excited numerous recommend

Third Exercise

Follow instructions given in second lesson on keyboard exercises.

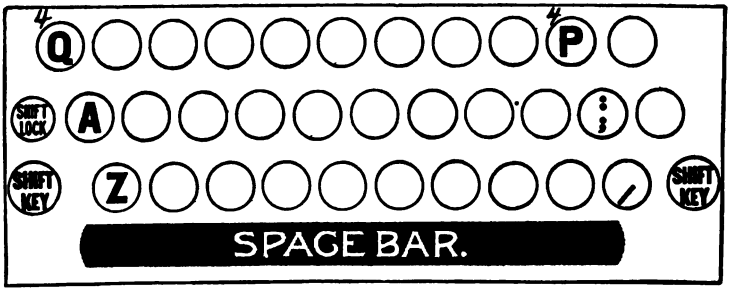
we were told they were to be there we were told they were to be there
we do not believe the business will justify the extension you suggest
the solicitor for the executor resisted the orders without conscience

Words of High Frequency

Write two lines of each word.

as	all	also	quite
at	are	that	equal
am	ask	many	small
an	has	take	usual
of	pay	what	after
up	was	dear	shall

Note: All keys are struck with the *FOURTH* finger.



First Exercise

Follow instructions given in lesson 2.

power	point	apply	place
azure	quick	equal	asked

Second Exercise

Repeat each line until rhythm, accuracy, and speed are acquired.

practice acquire property above policy zone quality presented realized purpose reply inquire prompt question public apply about prove private

acquaint package open queer request zero telephone message quarter way

prepare about promise zinc perfect await profit zealous problem please

quit piece prefer quick person aspire quote appear after appoint which portion expiration applause acquisition equal acquit apology anxiously

aqueduct approach pleasure assets price average pay argue associate at poor assumes plain attention query squirm pounds squares allow squeeze

Third Exercise

Write each sentence five to ten times.

nothing is useless to the man of sense; he turns everything to account

men discriminate in the affairs of others much better than in their own

whenever the big black fox jumped the squirrel gazed very suspiciously

Words of High Frequency

Write two lines of each word, starting each time from "home position."

go	any	far	not	say
no	and	one	how	sir
on	ago	men	she	due
so	big	use	get	got
of	can	yet	ton	old
or	day	its	six	nor

Capital Letters

To make capital letters, depress the shift-key *firmly* with the fourth finger and, while *holding it down*, strike the letter desired. *Do not strike the letter until the shift-key is depressed to the fullest extent, and do not release the shift-key until after the letter has been struck.*

If the capital letter desired is on the right-hand side of the keyboard, use the left-hand shift, and vice versa.

Practice making a few of the following combinations until you understand the shift-key thoroughly: Pl, As, Hu, Qo, La, James, William, New York, Chicago, Philadelphia, P. I., N. H.

Write the following sentence ten times, or until the shifting for capitals is mastered.

Raphael paints wisdom, Handel sings it, Phidias carves it,
Shakespeare writes it, Wren builds it, Columbus sails it,
Washington arms it, Watt merchandises it.—Emerson.

First Exercise

Fill one line with each word; repeat whole exercise until smoothness in operation is assured.

appear	appear	arouse	arouse	appall	appall
policy	policy	allege	allege	escape	escape

Second Exercise

Write each two-line group five times, starting from "home position" on each line.

bazaar people fall amazing zest utilize puzzle opaque departs citizen
can quiet pattern unique act pretty quinine day pictures supper calls

equip pressure cash reveal paid typify fame opera animals zenith came
conqueror east dozen harm zeal receipt patient glade evade fair elapse

quart year quit saw zephyr proper quickly adds inquiry poised quartet
ability prudent shall piquant said esteem prizes yards had rear happy

razor qualify potato afterward balance frozen extra air prelude amaze
pack arm piano equator ordinary rapidly make copies necessary
shipped

Third Exercise

Write first three sentences five times each; last, ten times. The last sentence contains all the letters of the alphabet and is useful as a review for each key position.

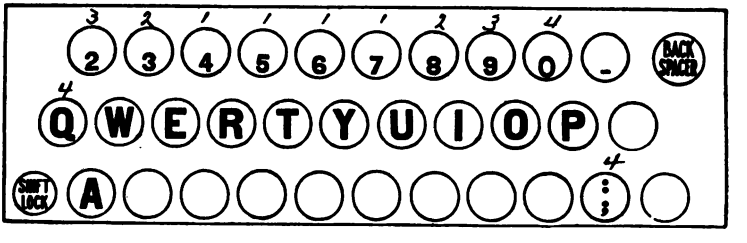
The path of success in business is invariably the path of common sense.

Write it on your heart that every day is the very best day in the year.

Luck counts once in a while but trained efficiency counts all the time.

Paul asserted that the quick brown fox slyly jumped over the lazy dog.

NUMERALS



Strike small l for the figure *one*. Use capital O for the cipher on machines not provided with a cipher. Use capitals for Roman numerals.

First Exercise

Write the entire exercise as shown; repeat.

w2e3r4t5 y6u7i809p0 w2e3r4t5 y6u7i809p0 w2e3r4t5 y6u7i809p0
w2e3r4t5
2w3e4r5t 6y7u8i900p 2w3e4r5t 6y7u8i900p 2w3e4r5t 6y7u8i900p
2w3e4r5t

w23e r45t y67u i890 p02w e34r w23e r45t y67u i890 p02w e34r 23456789
2638 3947 5876 9102 3524 4739 2638 3947 5876 9102 3524 4739 23456789

1234567890 1234567890 1234567890 1234567890 1234567890 123456789
0987654321 0987654321 0987654321 0987654321 0987654321 098765432

Second Exercise

One copy:

Alabama 5406 Alaska 4609 Arizona 2273 Arkansas 5335 California 8368 Colorado 5409 Connecticut 9998 California 7823 Delaware 3345 Florida 5119 Georgia 77439 5748 36490 Idaho 2039 Kansas 8745 Louisiana 6758 Maine 2039487 Nebraska 6758 New York 3948 Ohio 3920 Pennsylvania Rhode Island 2050 South Carolina 3686 Tennessee 487 Utah 2093 Vermont 1073 Washington 5248 Wisconsin 89 world 3084 manhood 3084 quince 3084 similar 3084380 serious 9152 upward 9152 machines 9152 business 9152

One copy:

This may be written in the form of an invoice, or copied as written above as a salesman's order.

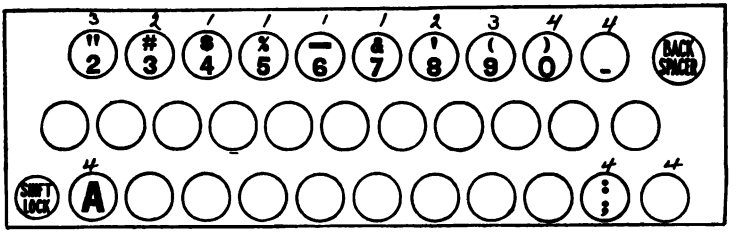
On March 9, 1921, you bought the following bill of merchandise from Ward & Duff, manufacturers of men's shirts, 1062 Tenth Street, Troy, N. Y. terms 3/10, 2/15, n/30; 10 doz. no. 631 madras shirts at $12.50 per dozen; $125; 5 doz. no. 269 silk shirts at $30 per dozen, $158; total $275. Shipped f.o.b. New York.

Third Exercise

Never trouble another to do for you what you can do for yourself.

Labor to keep alive in your breast that little spark of celestial fire called conscience.

We dislike to exchange job lots of sizes varying from a quarter up.



First Exercise

One copy:

w2 e3 r4 t5 y6 u7 i8 o9 p0 w2 e3 r4 t5 y6 u7 i8 o9 p0 w2 e3 r4 t5 y6 u7
s2 d3 f4 g5 h6 j7 k8 l9 ;0 s2 d3 f4 g5 h6 j7 k8 l9 ;0 s2 de f4 g5 h6 j7

"2 #3 $4 %5 –6 &7 '8 (9)0 "2 #3 $4 %5 –6 &7 '8 (9) 0 "2 #3 $4 %5 –6 &7
"w # $r %e –y &u 'i (0)p "w #e $r %t –y &u 'i (0)p "w #e $r %t –y &u
O'Hare & Co., 1684 (95#) bags pure "Star" salt, $2.37, 15% off, 10 days.
O'Hare & Co., 1684 (95#) bags pure "Star" salt, $2.37, 15% off, 10 days.

Words of High Frequency

Write two lines of each word.

send	true	reply	state	assure
seem	them	shall	these	amount
said	term	start	those	almost
soon	than	still	their	appear
says	this	study	there	attend
time	talk	stock	truly	afraid
then	with	today	appear	arrive
tell	week	since	access	astray
upon	were	spent	adjust	answer
work	what	under	across	become
went	want	usual	advise	bottom
wire	wish	value	affect	beyond

Third Exercise

Few of the things that come to the man who waits are the things he has been looking for. (19–4.1)

The more business a man has to do, the more he is able to accomplish; for he learns to economize his time. (22–4.8)

A man should never be ashamed to own that he has been in the wrong, which is but saying in other words that he is wiser to-day than he was yesterday. (31–4.7)

The public was amazed to view the quickness and dexterity of the juggler. (13–5.6)

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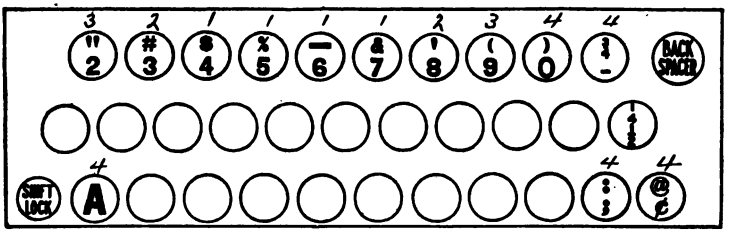


First Exercise

Repeat first and second lines five times; write last three lines once, as shown.

234¼ 6789¾ 234¼ 6789¾ 234@6789½ 234¼ 6789¾ 234¢ 6789½ 234¼ 789¾ 234¢

1–384756¼ 2–384756½ 3–384756¾ 4–384756@ 5–384756¢ 6–384756¾ 7–384756¢

@618¼ @618¼ @618¼ @618¼ @618¼ @618¼ @618¼ @618¼ @618¼ $5.25 $5.25 $5.25 $5.25 $5.25 $5.25 $5.25 $5.25 $5.25 $5.25 $5.25 $5.25 #400, #589, #872, #641, #753, #495, #654, #861, #679, #251, #759, #357.

Second Exercise

Our grand business is not to see what lies dimly in the distance, but to do what lies closely to hand. (21–5.05)

A word that has been said may sometimes be unsaid—it is but air—but when a deed is done, it cannot be undone, nor can our thoughts reach out to all the mischiefs that may follow. (37-4.84)

When we have parctices good actions awhile, they become easy; when they are easy, we take pleasure in them; when they please us, we do them frequently; and then, by frequency of act, they grow into a habit. (38-5.37)

My help squeezed in and joined the weavers again before six o'clock.

Words of High Frequency

Write two lines of each word.

word	feel	world	belong	change
year	five	which	before	clause
firm	give	would	better	cannot
four	gave	young	charge	cancel
full	gone	wrote	credit	custom
form	high	where	course	desire
half	home	kind	amiss	hurry
hand	into	late	claim	issue
hold	just	last	debit	light
hope	know	life	favor	local
help	live	list	found	might
here	knew	look	first	money

INTRODUCTION TO SPEED STUDIES

Copy the following:

The student should let speed alone until he has acquired habits of accuracy in typing. Accuracy is of the first consideration. Speed, of course, is necessary, but it is something that must be built on the solid foundation of accuracy.

When the habit of accuracy has been formed some work must be done to *accelerate movement*—but this should never be attempted at the expense of accuracy.

When he can operate the keyboard with certainty, when he knows the exact location of every key and can strike it unhesi-

tatingly, he can begin some work in accelerating movement on continuous matter.

Speed is the result of five things: First, efficient fingering ability; second, accuracy; third, continuity of operation; fourth, steady nerves; and, fifth, concentration. The importance of the latter feature can hardly be overemphasized. Acquire the habit of concentration early in your work. Perform all of your work with the utmost concentration that you can command. The habit will grow, and as it does, your typing efficiency will increase.

It is thought that continuous, concentrated effort toward the object of gaining speed will yield quicker and more lasting results. The following plan is suggested for the student to follow in the absence of more definite instructions:

Each exercise should be written and rewritten until the required speed is obtained. The first time the exercise is written the time should be noted. If the required speed is not attained on the first copy, continue the practice until it is reached. The oblique character / in the exercises indicates the end of the test, but the sentences in all cases have been completed.

The importance of *accuracy* must always be kept in mind. But it is to be expected that errors will be made when the forcing of acceleration is begun. Therefore in correcting the practice work in the Speed Studies, the rules used in the International Contests may be applied.

International Rules for Correcting Copy

General Rules

1. The writing should be double space on legal size paper (8½ x 13 inches).

2. But one error shall be counted in any one word.

3. The first writing only is to be considered in all matter which is rewritten. The rewritten matter should be penalized as one error only.

4. The marginal stops should be set so as to make the writing line seventy spaces long.

5. Paragraphs may be indented five or ten spaces, but must be uniform throughout.

How Errors are Counted

Five words from the total number written are deducted for each of the following errors:

1. Improper spacing.
2. Omission of a word.
3. Striking a wrong letter.
4. Faulty use of shift key.
5. Transposition of letters or words.
6. Undue margin at bottom of sheet.
7. Piling letters at end of line or elsewhere.
8. Failure to commence line at starting point.
9. Inclined margin caused by not starting paper straight in machine.
10. Deviation from copy in punctuation, capitalization, paragraphing, etc.
11. Unevenness in the right-hand margin.

Speed Tests

Two-minute Tests

First Exercise

Speed, 40; Time, 2:16

The first rule for a good style is that the author should have something to say; nay, that is in itself all that is necessary. Clear thought easily finds words to fit it. Words, it is true, serve to make thought intelligible—but only up to a certain point. If words are heaped up beyond it, the thought becomes more and more obscure again. To find where the point lies is

the problem of style, and the business of the / critical faculty; for a word too much always defeats its purpose.—*Schopenhauer.* (91–5.3)

Second Exercise

Speed, 40; Time, 2:18

As I was rambling one day about the Moorish halls, my attention was, for the first time, attracted to a door in a remote gallery, communicating apparently with some part of the Alhambra which I had not yet explored. I attempted to open it, but it was locked. I knocked, but no one answered, and the sound seemed to reverberate through empty chambers. Here then was a mystery. Here was the haunted wing of the castle. How was I to / get at the dark secrets here shut up from the public eye?—*The Alhambra.* (92–5.3)

Third Exercise

Speed, 40; Time, 2:25

If you would be loved as a companion, avoid unnecessary criticism upon those with whom you live. The number of people who have taken out judges' patents for themselves is very large in any society. Now it would be hard for a man to live with another who was always criticizing his actions, even if it were kindly and just criticism. It would be like living between the glasses of a microscope. But these self-elected judges, like their prototypes / are very apt to have the persons they judge brought before them in the guise of culprits.—*Arthur Helps.* (97–5.5)

Fourth Exercise

Speed, 40; Time, 2:04

These are the times that try men's souls. The summer soldier and the sunshine patriot will, in this crisis, shrink from the service of their country; but he that stands it now, deserves

the love and thanks of man and woman. Tyranny, like hell, is not easily conquered; yet we have this consolation with us, that the harder the conflict, the more glorious the triumph. What we obtain too cheap, we esteem too lightly; it is dearness only that gives / everything its value.—*Paine.* (83–5.6)

Fifth Exercise

Speed, 40; Time, 2:43

The ability to write a good business letter is a valuable asset. Since almost every large transaction turns on the pivot of a letter, the man who writes the letter wields a power which is worth cultivating. To place a proper estimate on the power of letter-writing is a big step towards business success. Everyone has heard of instances where a single letter has turned the favors of fortune. The chief ways of developing ability in this field are / as follows: write important letters by hand before dictating, consider the relative merits of incoming correspondence, study the art of rhetoric, and take pains with every letter you write.—*Thoughts on Business.* (109–5.8)

Sixth Exercise

Speed, 40; Time, 2:15

As every business man has something to sell—merchandise or services—it is important to acquire those qualities which go to make up salesmanship: courtesy, tact, knowledge of goods, judgment, accuracy, energy, appearance, and dignity. It avails nothing to say that these qualities are inborn. Whoever lacks them can measurably acquire them. The way to do so is open; observe those who possess them, adapt but do not imitate their best traits, analyze the subject and master it in sections, / love your work, and be in earnest all the time.—*Thoughts on Business.* (90–5.9)

The Mechanical Arrangement of a Business Letter

To the business man, the mechanical work on a letter—its form, arrangement, and appearance—is a mere detail, and is the last thing considered, *if it is done right.* But it looms big if it is *not.* The stenographer's work is always judged by the quality of the *transcript.* His shorthand may be abominable, but if he is able to read it (he generally cannot do so unless the shorthand is good) and can turn out a neatly arranged, accurately typed letter, his work will meet the requirements. Thus the mechanical features of a letter become of the utmost importance to the typist.

The Parts of a Business Letter

Theoretically, the business letter consists of the following parts:

1. *The Heading.* This embraces the printed or engraved name and address of the individual, firm, or corporation sending the letter. This information usually contains, in addition to the name and address, the telephone number and other facts for the convenience of the concern's correspondents.

2. *Date Line.* The date line gives the month, day of the month, and the year. This, as will be seen from the illustrations, begins usually about one double space below the printed matter. The year need not be followed by a period as it is obviously the end of a line. The date line usually begins about the middle of the page, or a little to the left of the middle, so that the line will finish flush with the body of the letter.

3. *The Inside Address.* This contains the name of the person addressed, the number of his house or place of business, the street, city and state.

4. *The Salutation.* The salutation consists of such words as "Gentlemen," "Dear Sir," "Dear Madam," "Dear Mr. Williams," "My dear Mr. Williams," etc. The salutation begins flush with the beginning lines of the body of the letter.

5. *The Body of the Letter.* This contains the message to be conveyed. The paragraphs of the body are indented five spaces from the beginning of the line.

6. *The Complimentary Close.* This consists of the closing words of a communication, as, for example, "Yours truly," "Very truly yours," "Yours sincerely," "Respectfully yours," etc. The complimentary closing usually starts about the middle of the line. In many offices it is the practice to begin the date line and the complimentary closing at the same point, as near the middle of the line as possible.

7. *The Signature.* This is usually pen written by the dictator.

8. *The Dictator's Initials.* These, together with the stenographer's initials, usually are placed a double space below the signature, flush with the llnes of the body of the letter. The initials are necessary to identify a letter in concerns where the correspondence emanates from many heads.

Proper Margins Important

The first thing to be considered in proper disposition of the matter on the page is margin, and it is in the arrangement of the margin that the average stenographer discloses his possession of the artistic sense or the lack of it. A simple illustration will make clear the correct view of the margin: The effect of a picture is much enhanced by its frame, or by a wide mat around it. In typing a letter, just consider the letter itself as the picture, and the margin, or wide space around it, as the frame, and you will get the right idea.

As the present practice is to use letterheads of the same size for all letters, it is obvious that *the shorter the letter* the *wider the margin* necessarily will be—and this applies to the top, the bottom and the sides. On the short and medium length letters the margin at the bottom may be left a little wider than the others, just as it is in first-class books. By the use of wide or

single space, as the case may demand, a good margin can always be obtained.

Paragraphs Relieve Monotony

Another point to be taken into consideration is paragraphing. Breaking the matter up into frequent paragraphs prevents a monotonous appearance. Paragraphs are usually indented uniformly five spaces. The following quotation from *Applied Business English and Correspondence* will serve to guide the typist in a general way.

"If we have several topics to be discussed in a letter, each should be treated in one paragraph usually introduced by a topic sentence which prepares us for what follows. If the topic is such that an extended treatment of it is necessary, it will, naturally, be divided into paragraphs. A paragraph should be a collection of sentences treating on *one* subject *or on one view of a subject*. . . . Paragraphing at best is a question of taste. A business letter may consist of one or more paragraphs, according to the number of subjects or the number of *phases of one subject.*" As most short business letters treat of one subject, the general rule of paragraphing always cannot be followed. In short letters, *the introduction* usually is placed in one paragraph, *the subject* treated in the second, and the *closing sentences* in the third.

Illustration of a double space indent letter:

ROGERS PEET COMPANY
NEW YORK, N. Y.

August 15, 1921

Mr. Rupert P. SoRelle
7 Kensington Terrace
Bronxville, New York

Dear Sir:

As Mr. Omer said to David Copperfield--

"Fashions are like human beings. They come in nobody knows when, why or how; and they go out nobody knows when, why or how."

But that was before our time.

Of course nowadays the "why or how," as in Dickens' time, makes little practical difference, but most certainly our friends and customers, like your good self, expect us to know when.

Right now, for instance, fall styles and the new "Forefather" fabrics are just in.

May we have the pleasure of showing them to you?

Respectfully,
ROGERS PEET COMPANY

FEM/GHS

Note: The *firm name* in this letter is Rogers Peet Company. The date of the letter, August 15, 1921, is begun at 45 on the white scale on the typewriter.

Mr. Rupert P. SoRelle
7 Kensington Terrace
Bronxville, New York

is the inside address. In this particular letter the lefthand marginal stop is set at 10. The name is written flush to the marginal stop, the street address at 15, and the city and state at 20.

"Dear Sir:" the salutation begins at the left marginal stop.

Each paragraph is indented 5 spaces.

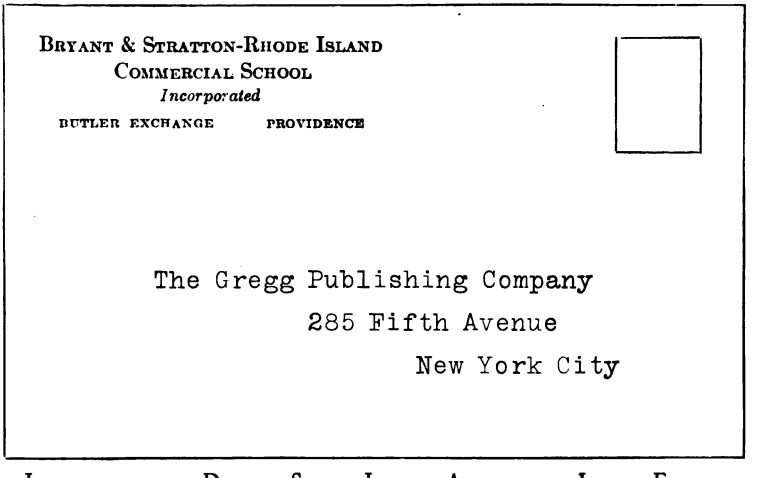
The complimentary close—Respectfully—is usually begun at 35 on the scale.

The signature consists of the name of the company in capitals upon whose letter-head the letter is written, and the line upon which the signature of the person who signs the letter is written. This section of the letter is begun at 40 and at 45 if the *indent* style is used. If the *block* style is used both begin on 40.

The initials of the dictator of the letter and of the stenographer are written flush with the marginal stop—FEM/GHS.

In a single space letter *two* single spaces are allowed between each paragraph and two single spaces precede and follow the body of the letter.

Note: The envelope must be addressed in the same style as the inside address of the letter enclosed in that envelope.



1. ILLUSTRATION OF DOUBLE SPACE, INDENT ADDRESS ON LARGE ENVELOPE

DONOVAN & ARMSTRONG
Advertising
COMMONWEALTH BUILDING
PHILADELPHIA

Mr. Ayrton A. Howard
600 Fulton Street
Rochester, Indiana

2. ILLUSTRATION OF BLOCK FORM OF ADDRESS, DOUBLE SPACE.

THE PLIMPTON PRESS
NORWOOD, MASS., U. S. A.
Perfect Bookmaking in its Entirety

Benziger Bros., Publishers
36 Barclay Street
New York City

3. ILLUSTRATION OF DOUBLE SPACE, INDENT ADDRESS.

J. E. LINDE PAPER CO.
BEEKMAN & CLIFF STS.
NEW YORK

Mr. E. L. Morgenstern
Mississippi River Commission
12th Floor, Queen & Crescent Bldg.
New Orleans, Louisiana

4. ILLUSTRATION OF FOUR-LINE ADDRESS, SINGLE SPACE, BLOCK.

The following letters are taken from *Shorthand Dictation Drills*, by John Robert Gregg.

Make a correct copy of each exercise, using the model as a guide for arrangement.

Note: Use your city and state and the current date. Use the names of the customers and creditors of the McGill Company (see Chapter Ten) for the name of the firm on the letterhead for the Incoming Mail. Use the McGill Company for Outgoing Mail.

Center the name of the firm and allow a space of about two inches from the top of the paper. Send these letters to the Filing and Outgoing Mail Departments.

Mr. Edward Wallace, Savannah, Georgia. Dear Sir: We have your bill for thirty dozen combs. Our order was for a duplicate of your invoice 913, and these combs are not what we wish. The comb we carry is like the cut which we inclose. If you can duplicate it, send the thirty dozen combs immediately. How shall we return the combs on hand? Yours truly,

The McGill Company, 210 Bedford Street, Stamford, Conn. Gentlemen: We are using a new kind of ink on your job, and we know that you will like it. The paper and type are fine, and the whole will look well. The books will be ready early in the week and will be sent to you at that time. If you wish to call at our shop to-morrow, we can show you a few pages. The prices on both ink and paper are increasing every day and you are saving money by having your fall lot of books printed now. Yours very truly,

Mr. George D. Maguire, Buffalo, New York. Dear Sir: The mortgage we have on your house and lot will be due on the 25th of this month. The house needs painting and the tenants say the roof leaks every time it rains. If you wish us to renew the mortgage for three years, we will do so if you will paint the house and put on a new roof. This will insure its being leased for the term of the mortgage. If you are not willing to do this, we shall have to ask you to arrange to take care of the mortgage when it becomes due. Yours respectfully,

Mr. Jerome Thompson, Nashua, N. H. Dear Sir: Kindly inform us what has occurred in connection with the Rogers matter. The interest on this loan is due March 19 and we have been hoping that the principal and interest would be settled at that time. Your clients should really pay 5½ per cent on the interest if it is not paid when due. Also kindly give me the name and address of the proper person to communicate with in regard to the interest due on March 19. We shall appreciate it if you will write him in regard to this interest so that there will be no question about its being paid promptly. Yours truly,

McDonald & Rich, Providence, R. I. Gentlemen: We regret that we shall not be able to give you any business for the reason that your shipping points are so far from us that it makes our freight rates excessive. Besides prices on our products have not advanced sufficiently to warrant our paying the prices you are now asking for mattress stock. We have a fair supply on hand,

but we shall undoubtedly have to purchase an additional stock within the next two or three months. It is possible that we shall take the matter up with you later, and if so, some business may come your way. We thank you very much for the quotations and information which you have furnished us. The booklet will be kept in our files. Yours truly,

Illustration of single space letter with block inside address and block signature.

MARSHALL FIELD & CO.
CHICAGO, U. S. A.

July 20, 1916

Miss Pauline M. Caldwell,
Hotel Blackstone,
Chicago, Illinois.

Dear Madam:

We regret our inability to adjust the transaction pertaining to the curtains according to your wishes, owing to the fact that our stock is exhausted.

If you intend to be in the store in the near future, we recommend that you stop at our Adjusting Bureau, as we believe a personal interview will assist in disposing of this matter to your satisfaction. In the event of your calling, please present this letter for reference, so that there will be no delay in connecting the previous papers.

Yours very truly,

MARSHALL FIELD & COMPANY

MF/VJ By_____

Make a correct copy of each exercise, using the model as a guide for arrangement.

Brown & Sharp Mfg. Co., Providence, R. I. Gentlemen: This is a reply to your letter of March 27 relative to your order for blocks. We will complete loading one car today and will ship you the second car on your uncompleted order at as early a date as possible. We have had considerable trouble with our press during the past week and that has put us behind with all our shipments. We have not intentionally held your order to give other business the preference, but the delay has been occasioned by our inability to make the blocks fast enough for our orders. You are aware of the fact that this is a very busy season with us. Yours very truly,

Mr. Wm. S. O'Gorman, Los Angeles, California. Dear Sir: Immediately after receiving your letter of the 5th, we looked up the order which you placed with our agent, Mr. Albert Lynch, on June 18. We find that the keg of nails and the hammers called for were shipped from our mill on July 28. They should have reached you long before this time. We are having them traced from this end, and suggest that you keep after the freight office at Dallas. They should have some record of this. If you wish the order duplicated, write us immediately. Yours very truly,

Mr. Wm. H. Upton & Bro., Richfield, Utah. Gentlemen: We regret to inform you that your claim for $12.17 for damage on goods delivered October 8 has not been allowed. Our records clearly indicate that the shipment left our shipping room in good condition and was delivered to your shipping clerk in good condition. If the shipment is damaged, the responsibility does not lie with us. We trust that you will be able to place the responsibility and that the matter will be adjusted without loss to you. If copies of our records on the shipment will help you,

kindly notify us and they will be promptly forwarded. Very respectfully,

Mr. Frank J. Arnold, Pittsburgh, Pa. Dear Sir. Several days ago I had an opportunity of showing you our office furniture. If you have not completed the purchases for your new office, can't you come in again some day soon? We received a few of the new desks and chairs yesterday and the others will arrive in a day or two. I believe that these new styles will appeal to you. At any rate, I should like to have you see them before making your final decision. We can furnish these styles in any standard finish or can make them up to match the furniture you now have. If you decide to get all new furniture, we will make you a liberal allowance on any pieces you want to turn in. Our guarantee covers both service and quality. Yours very truly,

The McGill Company, 210 Bedford Street, Stamford, Conn. Gentlemen: About three years ago I visited your plant and saw there what I took to be the machinery of an old Model A Wright biplane. As I have one of these machines that I am rebuilding for exhibition purposes, I should like to know if you would be willing to sell me this old machinery. I should want the two propeller shaft brackets with shafts and propellers, also chains and chain guide. I should also like an old-style, 4-cylinder, 25 H. P. Wright engine. This outfit would not have to be in running condition as it is intended for exhibition purposes in a museum. If you cannot furnish me with these parts, perhaps you can inform me where I can procure them.

I am inclosing a small photograph which I took of your hydroplane when I was at your plant. You may be able to use it for advertising purposes. Very truly yours,

Illustration of single space indent letter:

THE NATIONAL CITY BANK
NEW YORK, N. Y.

October 15, 1921

Mr. Guy S. Fry
77 Madison Avenue
New York City, New York

Dear Sir:

We are pleased to offer for your investment, subject to prior sale and advance in price, the new issue of Anglo-French 5% Five-Year Gold Bonds at 98 and interest, netting close to 5½%.

The loan is definitely due and payable in five years. At your option, however, these bonds may be converted into a 4½% obligation maturing in from fifteen to twenty-five years. If we may draw any conclusion from the past, it would seem that this may become a valuable investment privilege.

The bond is unusual in that the United Kingdom of Great Britain and the Republic of France are not only jointly liable but each of the two nations is severally liable for the punctual payment of the entire loan, principal and interest.

We recommend these bonds for investment and shall be very glad to be advised of your wishes.

Yours very truly,

THE NATIONAL CITY BANK

AM/FLJ

Bond Department

Make a correct copy of each exercise, using the model as a guide for arrangement.

Mr. Louis E. Lawrence, Annapolis, Md. Dear Sir: We are sending you a copy of our invoice of March 12 for $93.64 in order that you may have the opportunity to check it up with your records. Our books indicate that this bill is still unpaid. If there is any error on the invoice, please write us about it at once and we will gladly make the necessary correction. Yours very truly,

Mr. James MacDowell, Detroit, Mich. Dear Sir: We sent you today from our Cincinnati factory the merchandise ordered in your letter of May 10. We are obliged to ship with a bill of lading attached, inasmuch as you are not personally known to us or to the trade in Cincinnati or in Toledo. We shall be pleased to receive references from you and to investigate them. If these references are satisfactory, we will willingly open an account with you. We thank you for the liberal order and trust that this will be the beginning of long and prosperous business relations between us. Very truly yours,

The McGill Company, 210 Bedford Street, Stamford, Conn. Gentlemen: As suggested in your letter of April 21, we are writing your customer, the Automatic Furniture Company, asking that they furnish us with the necessary information for filing this claim. On receipt of their letter, you will hear from us. We have also a voucher covering the overcharge on the shipment made to the Atlantic Coffee Company, for which we thank you. Signed receipts are inclosed. We appreciate the energetic manner in which you are looking after our interests in your part of the country. Very truly yours,

Mr. Frank R. Quinlan, Bangor, Maine. Dear Sir: Some time ago we placed in the hands of the Second National Bank

of Denver for collection your note due May 5. So far as we know, this note has never been paid. Several days ago we asked the bank to give us a report and they informed us that they had never received the proceeds. So long a time has now elapsed that you should see the urgency of immediate payment. We do not mind telling you that we need the money badly to meet an emergency call. We shall certainly appreciate it if you will give this matter your special attention. Very respectfully,

The Wilson Sargent Co., Louisville, Ky. Gentlemen: At the suggestion of our agent, Mr. James Grant, we are mailing to you today, without charge, one dozen pairs of the 50-cent size cushion heels. You may put these in stock with what you have and clean out the whole lot at 25 cents each. You will then be ready to put in our new 25-cent heel. The price and quality of this new heel will certainly please your customers. We sent a trial lot of five dozen pairs to a large firm in Clinton on Monday, and yesterday afternoon they wired us for three cases. Yours very truly,

Mr. M. J. Slater, El Paso, Texas. Dear Sir: The confidence that you have expressed in consulting us about your investments is, we assure you, much appreciated. The Standard Gas and Electric Company six per cent gold notes in denominations of $50 and $100 furnish a satisfactory investment for the savings of people of small means, and we recommend them for the earnings of your two children. We have a large number of accounts of this nature on our books and we consider it desirable business, as it often grows into a good-sized investment in the course of a few years.

We shall be glad to receive your order for these notes, or to reserve them for you if you are not prepared to purchase now. Very respectfully,

Illustration of single space, block inside address, block signature, and block paragraphs letter form. This represents the *first page* of the letter—it is not complete:

THE CURTIS PUBLISHING COMPANY
PHILADELPHIA, PENN.

July 20 1916

Mark Cross, Ltd.
89 Regent Street
London, W., England

Dear Sirs:

Every day in the year the American people consume more than $1,400,000 worth of merchandise purchased from the United Kingdom, Germany, France, Austria, Hungary, Belgium, Sweden, Netherlands, Switzerland and Italy.

The total annual exports from these countries to the United States are valued at more than $500,000, but no country in the world has recently shown such great changes in foreign trade as has the United States.

Within ten years international relations have so shifted that, instead of being primarily an exporter of food, and an importer of manufactures, the United States is exactly reversing its position.

Our importations of one classification alone, iron and steel manufactured commodities, which in 1903 were of the money value of $41,000,000, decreased in 1913 to $34,000,000. Meanwhile, our exports of manufactured products have been, in their increase, one of the most striking of international trade phenomena.

Make a correct copy of each exercise, using the model as a guide for arrangement.

R. H. Macy & Co., New York, N. Y. Gentlemen: In making up your order we find it impossible to supply you with the exact quality of serge that you desire. Rather than delay your shipment until a fresh supply is received. we have selected from our stock another piece of a little better quality than the one you ordered. This material costs us more and regularly sells for more, but, since the fault in this case is ours and not yours, we are not going to charge you anything extra. If you find on examination that for any reason you cannot use this material, we shall be glad to have you return it to us at our expense. We thank you for the order and we hope to have the pleasure of hearing from you again in the near future. Very truly yours,

Baldwin, Serchson & Co., Columbus, Ohio. Gentlemen: Inclosed you will find a letter that we received from Edwin McKenzie in regard to the car of white corn that he shipped through me on which he got 12 per cent discount. He shipped several cars out of the lot that graded No. 5. As you will note from his letter, which we inclose, he cannot understand why this car did not grade No. 5, and he also thinks the discount is excessive. Will you kindly write us again in regard to this car so that we can show him the letter. If you can do anything in this matter, please act promptly. Mr. McKenzie has been a good customer of ours for many years and it is important that we keep him satisfied. Yours truly,

Mr. Joseph Ziegler, Akron, Ohio. Dear Sir: We acknowledge with pleasure the receipt of your request for a copy of our complete catalog. We do not issue a general catalog, for the reason that we are constantly bringing out improvements; and we feel that our customers are always entitled to the newest features at the time of purchase. Accordingly, we are today instructing our agent, Mr. J. A. Stewart, 23 South Avenue, Topeka,

Kansas, to call on you at his earliest convenience. Mr. Stewart will be in a position to offer you some very interesting suggestions, and we are sure that his visit with you will be both pleasant and profitable. In the meantime, perhaps we can lend assistance on some of the general problems of your business. Our Merchants' Service Bureau is maintained for this special purpose and we invite you most cordially to avail yourself of the privilege. We are awaiting with interest the receipt of further word from you—either direct or through Mr. Stewart. Yours very truly,

American Printing Company, Fall River, Mass. Gentlemen: Please send to our New Haven publishing office the following: 50 lbs. 28x34, 60 pounds, white bond; 500 sheets Irish Linen; 10 reams, 9x14, Mimeograph, 1000 sheets in pkg.. Kindly ship by N. Y., N. H. & H., Adams Express. The above order is to be invoiced, net f.o.b. your mill, or c.i.f.. terms 3/5, 2/10, n/30 as per your quotation No. 7894 of the 9th. We note shipment will be made in three days from receipt of the order, therefore we are counting on you to ship the above order not later than Wednesday of this week. Yours very truly,

The McGill Company, 210 Bedford Street, Stamford, Conn. Gentlemen: We are writing to call your attention to the fact that your account covering the invoice of February 20 amounting to $235 is now due. The terms on this invoice were 4/5, 2/10, n/30 and the merchandise was shipped c.i.f. If you desire to take advantage of the discount allowed by the terms as quoted it will be necessary for you to send us your check by return mail. We ask that you give this matter your early attention. Yours truly,

How to Make Duplicate or Carbon Copies of Invoices, Bills, or Letters

Place a plain sheet of paper upon a flat surface, then place the carbon sheet, with the carbonized surface *downward*, on

the top of the plain sheet, then place the letter head with the printed side upward upon the carbon sheet.

Have the carbon sheets and letter sheets evenly arranged and insert in the typewriter with the printed form farthest from the cylinder or platen. The original letter must be written on the letter paper of the firm and the carbon copy on a blank sheet.

When making a carbon copy if it is necessary to erase, insert a piece of paper between the carbon and the sheet of paper from which you wish to erase. Use a soft pencil eraser first, and then use a typewriter eraser. An eraser shield which has small openings which fit over the letter or figure to be erased is convenient to use in such case.

A carbon copy should always be made of an outgoing letter. Extra copies may be made if the original copy is written with the naked type as is done in making a stencil for use on a mimeograph.

When several copies are to be made place first a letter sheet, and then a carbon sheet, the carbonized surface facing the platen.

Assignment:

1. Practice the arrangement of paper and carbons. Practice inserting them in the typewriter. Depress the paper release when inserting and removing the sheets. If you want to write on ruled paper depress the paper release, and by turning the cylinder slowly you can adjust the ruled line with the cylinder scale, or pull out the cylinder knob, thus releasing the cylinder.

   After the student thoroughly understands the method of putting in and removing the sheets, write a copy of one of the form letters in the typewriting section of the text.
2. Make carbon copies of all the letters sent out today by our correspondence department.
3. After the original copy has been sent to the outgoing mail

department, arrange the carbon copies for filing. Underline the file name with *red pencil.*

4. File the first ten letters alphabetically.
5. File the second ten letters geographically.
6. File the third ten letters according to the subject of the letter.

The Mimeograph

In ancient times the Romans carried with them tablets made of wood or iron covered with wax on which they wrote with a sharp iron instrument called the stylus.

Before the advent of the typewriter, the stylus was also used as a method of duplicating handwriting, which was then, and is now, known as the *mimeograph.*

How to Typewrite a Wax Stencil

See that the type faces on the typewriter are thoroughly cleaned and that the ribbon is disengaged. Most of the typewriting machines of the present day have a device that automatically disengages the ribbon. In using the wax sheet, it is not necessary to use the silk sheet, unless the typewriter is in poor condition. In that event remove the porous sheet furnished with each composite stencil and substitute the silk sheet.

The Dermatype Stencil

The Dermatype stencil must be softened while in the process of writing. To accomplish this, it is necessary to use a fluid which is known as Dermax. A handy roller is used to roll the stencil before moistening the backing. This roller is on the order of a mailing tube. It is well to spread a sheet of newspaper or blotter on the table while moistening the backing sheet so that the excess moisture that squeezes out in rolling down the stencil will absorb into the blotter or the newspaper. The stencil *must be moist while writing.* It will not show any impres-

sion while it is dry or in the process of drying. In the event that the copy to be written is too lengthy to hold the moisture long enough (which under ordinary conditions should last from thirty to forty-five minutes depending, of course, on climatic conditions; you must figure that if you are writing this stencil near a steam radiator or an open window, it is likely to dry), it is well to finish a paragraph and take the stencil out of the typewriter and moisten it on the outside. Do not disturb the Dermatype stencil once you have rolled it on the backing. Not that it will harm it, but there is no necessity for doing so. Before inserting it into the typewriter again, blot off the excess moisture. By no means should it be placed in the typewriter when wet.

THE MIMEOGRAPH

By having the type on the typewriter thoroughly cleaned the impression will show clearly on the stencil while writing it, and will act as a guide as to whether the stencil is being cut clearly. Make certain that your ribbon is disengaged and that you are writing with the *bare type*, as a stencil cannot be cut through a ribbon.

In removing the stencil from the typewriter, use a sheet of paper about the size of a letterhead, divide it in half and bind the end of the stencil as you are taking it out of the typewriter, so that if any excess moisture squeezes out of the end, it will absorb in the paper. An envelope may also be used for this purpose.

Directions for Cleaning and Filing Dermatype Stencil for Future Use

Blot it several times between sheets of newspaper to make sure that no ink is left in the perforations as the ink is apt to harden, and when brought out for use again it will not give a perfect impression. Determine this by holding it up to the light and see that the perforations are clear. Place your stencil between two sheets of paper and fold as you would for legal size envelope. Insert it in an envelope and file.

Typists who use the touch system should be very careful that they strike the end letters of the keyboard as uniformly as the others, as the small fingers are not as strong as the others. The ideal touch on a typewriter for stencil cutting is known as the staccato blow. It does not matter so much how hard one strikes a key; all depends on how quickly he gets his finger away from it.

A good method of filing is to use the subject matter of the stencil as a title and give the stencil a number. Write this data on cards (3″x5″) alphabetically, arranging the subject matter and number. File the stencils numerically. When looking through the cards for a stencil, refer to the subject matter. The card will show the number of the stencil and in this way it takes only a few moments to find it.

The Use of the Mimeograph Machine

The Rotary Mimeograph machine has a metal cylinder with a perforated diaphragm. This cylinder connects with a rubber roller underneath, between which the paper passes and forms the impression. The ink is fed through this perforated diaphragm from the inside of the cylinder and absorbs on a cloth pad which is attached to the diaphragm.

This cloth pad should be changed at frequent intervals. The more work that is done on the machine the less often the ink

pad would have to be changed on account of a fresh supply passing through this cloth and keeping it in good condition.

On the improved rotary machines the rubber impression roller automatically releases itself from the cylinder and will only engage when the paper is passing through. On the older type machines a lever is used to engage the roller with the cylinder, and if by error the cylinder is rotated while no paper is passing through, an offset will appear on the impression roller, the result of which is that it requires the roller to be cleaned and a number of sheets fed through the machine until these shadow impressions are removed.

PREPARING THE STENCIL

After the stencil is written the backing is removed by tearing it at the perforations. All that remains of the stencil is the button-hole strip and the stencil itself. The stencil is placed on the cylinder face down and clamped.

PLACING THE STENCIL ON THE MIMEOGRAPH. NO. I

In event that a wax sheet is used, before putting it on the mimeograph, the top tissue and the porous sheet between the stencil and the backing is removed, and the stencil is put on the cylinder with the backing strip attached until the stencil is in proper position. The reason for this is that the wax is very sensitive and requires protection until it is properly clamped on the machine, and then the backing is torn away at the perforations.

The old-style machines had a counting device, known as the cyclometer, which counts at each revolution of the cylinder. This is improved on the late machines by a new recording device which will not count unless the copy is actually printed. It is called a *print recorder.*

PLACING THE STENCIL ON THE MIMEOGRAPH. NO. 2

Hand feeding is best accomplished by combing the paper so that a single sheet can be picked up with ease. By pressing the thumb on the top of the paper and using the forefinger to pick up each sheet separately, greater speed can be accomplished as soon as you become accustomed to the feed of the paper. The paper is then placed to the guide stops. This is as far as it will go and the handle revolves until the copy drops into the receiving tray.

Assignment:

Prepare a dermatype sheet and cut a stencil on the typewriter. For copy, use the sales letter advertising sanitary drinking cups to the trade. After the stencil is cut, send it to the mimeograph department with instructions to have 100 mimeograph copies run off for the outgoing mail department.

Examination questions, home work assignments, duplicate copies of school programs, and desired information for distribution throughout the school may be assigned to the students in their office-practice-class recitation periods. A member of the office-practice class should be assigned to cut the stencil during the recitation period and to run off copies on the mimeograph. Several such assignments should be given on this work.

Sales Letter Advertising Sanitary Drinking Cups

The company wishes to send out a sales letter concerning a new department, that of advertising sanitary drinking cups to the trade. A sales letter is "salesmanship on paper." It must give a buying impression, and must interest the reader in the article we wish to advertise or sell. It must describe the distinctive qualities of the article so that the prospective customer will feel a need for same after reading our letter. A sales letter is usually printed in typewriter type and the inside address is typewritten, the ribbon used matching in color the ink used in the printing. If the printer uses small pica typewriter type in printing the letter, a typewriter having small type must be used for filling in the inside address. Unless a letter appears to be a personal one and has an individual appeal to the person to whom the letter is addressed, it generally finds its way into the waste-paper basket in a busy office.

Assignment:

1. Using the Classified Telephone Directory of your city, make an alphabetical list of the names, addresses, and the telephone numbers of the following business concerns. Leave the list on the desk of the chief clerk:

   Ten physicians, lawyers, brokers, publishing and advertising concerns, dentists, accountants, retail dry goods concerns, and millinery establishments.

2. Write a letter, omitting the inside address, in single space, block form, using the following data:
   The McGill Company, 210 Bedford Street, Stamford, Conn., desires to advertise Sanitary Drinking Cups. Telephone Stamford 1146. Sign your name in ink as manager of the company. The following information may assist you:

   It is now known that the "common drinking glass" is the greatest germ carrier in public life. In fact, there is a rigid

law that forbids its public use, and the penalty is imprisonment and a fine of $250. Both the criminal law and the moral law demand that you use clean, sanitary, individual cups in your office and factory. Do not risk arrest and a fine by continuing the use of the "condemned public glass."

Give your customers and employees clean water in clean cups. Your customers do not like to endanger their health by drinking from a germ-breeding glass that has been used by everyone.

You cannot afford to permit one employee to endanger the health and lives of all your employees by spreading colds, influenza, and such diseases by using the "condemned glass." Do not weaken the efficiency of your organization—especially these busy days.

3. Send the letter to the mimeograph department and have a typist cut a dermatype stencil and run off 100 copies on the mimeograph. The mimeograph department is to send the mimeographed letters to the typewriting department. This department is to type the inside address on each letter, using the list approved by the chief clerk, and address an envelope or send a sufficient number of window envelopes with the letters to the outgoing mail department where the letters are to be folded properly and enclosed in envelopes and stamped.

CHAPTER EIGHT

Indexing and Filing

The business man in the days of the old-style roll-top desk, with its many cubby-holes, which were always filled with every kind of business memoranda and correspondence, began to realize that some sort of classification of commercial papers and correspondence should be used.

He usually had a straight or bent wire spindle with a point on which memoranda was pressed down, the sharp point piercing the papers and holding them. These papers usually were memoranda with no idea of classification, and were to be attended to either that day or the following business days. The office boy copied all the outgoing mail, and the invoices or bills to be sent to the creditors of the company, in an old-fashioned letterpress book. This was a very slow process, and necessitated the use of a bound letterpress book consisting of tissue sheets and an alphabetic index. To copy the letter or invoice on the tissue sheet of this book it was necessary for the office boy to moisten a sheet of the tissue, place the letter or invoice to be copied on the top of this moistened sheet, place an oiled board on either side of the moistened sheet to protect the dry tissue of the book, close the book and place it under pressure in a letterpress operated by hand.

When it was necessary to refer to any correspondence in one of the cubby-holes of a roll-top desk the business man had to hunt through all the letters and memoranda to find the desired letter or invoice, so also with this letterpress book; the correspondence or invoice to or from an individual or company could not be in one section of the letterpress

book. In looking up a letter it was often necessary to search through many letterpress books. The only advantage of this system was that a copy was an exact duplicate of the original for the copy of a letter was never made until the letter was

CORNER OF A FILING DEPARTMENT

signed, the signature always appearing on the copied tissue sheet.

With the general use of the typewriter and the facility of producing carbon copies of letters at the same time as the original, the taking of letterpress copies has been discarded in favor of the carbon copies. The only important use for a letterpress book nowadays is for making an exact copy of all government documents. The letters and legal records sent out by government officials in certain departments have to be copied

exactly and with the signature of the official who signed them. Carbon copies are made on the typewriter while the original is being typed. The carbon copies are filed while a letterpress copy is made of the original after it has been signed. The copy in the bound letterpress book is always used if any legal adjustment has to be made later.

Before the days of the loose-leaf system of bookkeeping in the accounting department there was no danger of the commercial papers being lost as they were copied in bound books. As business progressed and modern office appliances became part of every concern, the impression seemed to be that a system of filing of business records should become a part of the efficiency idea in business, and naturally the development of a proper filing and record-keeping system was the result. Filing has developed until today it ranks on the same basis as the accounting and the stenographic departments.

The watchword in all systems of filing is carefulness, as the efficiency of every filing system depends upon the ability to find the papers at a moment's notice.

Indexing

The essential feature of any filing system is the indexing, which means the separation of the office records into groups for reference purposes. The initial step in developing systems of indexing for filing was the compiling of a list of business names from all parts of the United States, each name being written on a separate slip. The slips were assorted in alphabetical order and tabulated to show the number of times each name occurred. The tabulated result showed that the number of names under the various letters of the alphabet varies very greatly, the X having the least, and the letter S the greatest number of names. Letters filed in an ordinary A, B, C, index according to this would be very unevenly distributed, the letters E, I, J, O, Q, U, V, Y, and Z would be few, while B, C, H, M, S

would run very high; therefore a scientific subdivided alphabetic system is often used in filing.

The plain or simple alphabetic index used in filing consists of a set of twenty-five guide cards, one card being used for each letter of the alphabet, excepting Y and Z. As a business having a large correspondence needs more careful subdivisions of the alphabet in order to distribute the contents of the files more evenly, the scientific subdivision came into use and was known as the subdivided alphabetic. It consisted of a 40, 80, 120, 200, or more divisions of the alphabet. To illustrate: All names beginning with Aa are filed in a folder back of a guide card marked Aa; Ab follows, then Ac, Ad, Ae, Ai, Ak, Ala, Alb, Alk, All, Alm, Alz, etc., throughout all the letters of the alphabet.

The first index in printed bound books was in the old-fashioned ledger and the letterpress books. This system of indexing consisted of several ruled sheets with cut pages or projecting tabs on which were printed the divisions of the alphabet. Every office record must be indexed in such a way as to be immediately accessible when desired by any member of the office force.

Alphabetizing

Alphabetizing is necessary in all systems of filing used by business houses. To alphabetize means to arrange words alphabetically as, A, B, C, D, E, etc. Strict alphabetic order means that Aa must precede Ab, and Ab must precede Ac, and so on through all the letter combinations as in the following:

Aaron, Abraham, Acker, Adams.

Aaron, Alfred—Aaron, Henry—Abraham, John—Abraham, Samuel—Acker, Mary—Acker, Rose—Adams, George—Adams, James.

To arrange names according to the dictionary, where it is

necessary to carry out the alphabetizing to the last letter in the word, it is best to do this to each word:

Smithfield Smithson

This method immediately shows that the name Smithfield should precede the name Smithson.

The directory arrangement applies to the names of persons, firms, corporations, or institutions. The surname always precedes the first or given name. For example:

Lawrence, Louis E.	Wilson, Arthur
MacDowell, James F.	Givens, Amos (Dr.)

When the first name begins with "The" the article follows in parentheses, as: Holt, Henry Co. (The).

When the firms are incorporated and use the abbreviation "Inc." as part of the name, the letters follow in parentheses, as: O'Neill Land Co. (Inc.)

Names beginning with *Mc* always precede names beginning with *M*, while names beginning with *Mac* follow the strict alphabetical order of the names beginning with *M*, as in the town or city directory. The telephone directory follows the strict alphabetical order, the *Mc's* being classified the same as the names beginning with *Mac*.

Surnames spelled as two words, as: *Du Pont, Charles* are considered as one name and are alphabetized under the letter *D*.

Abbreviated words are considered as if spelled out, as: Wm., William—St., Saint.

Disregard the words *and, for, of,* and the ampersand—&.

Charles Henderson & Co. should be written as Henderson, Charles & Co.

State and city departments should be alphabetized under the name of the city and state. For example: The State of Connecticut should be alphabetized as *Connecticut, State of.*

Federal departments should be placed under the "U. S." and "Dept. of." For example: U. S. Dept. of Interior should be alphabetized as *U. S. Interior, Dept. of.*

Words in any form of dictionary or directory arrangement are alphabetically arranged. In the dictionary the words are arranged alphabetically, while in a table of contents the subjects or topics are arranged alphabetically. In large type at the top of each page is given the first and the last word which is printed on a page of a dictionary, and the first and the last name on a page of a directory.

In order to arrange for alphabetizing, the material should be systematized before you begin the work. The following arrangement is suggested:

Crease a sheet of paper and write the different letters of the alphabet in the squares, as:

A	B
C	D
E	F
G	H

Write all the names or words beginning with each letter in the square assigned to that letter, and then mark each name with the numbers 1, 2, 3, 4, 5, etc., as applied in the strict alphabetical arrangement.

If slips of paper or cards are to be arranged in strict alphabetical order, or are to be alphabetized, arrange in packs according to the first letter having Aa precede Ab, then Ac, followed by Ad, etc.

The following names are arranged in strict alphabetical order in the second column, and according to the directory arrangement.

George W. Anderson	Anderson, George W.
William Andrews & Sons	Andrews, Wm. & Sons
The F. A. Ferris Co.	Ferris, F. A. Co. (The)
M. A. Harris & Bro.	Harris, M. A. & Bro.

James Lawrence & Co.	Lawrence, James & Co.
Martin McNeill	McNeill, Martin
Henry Marron & Son	Marron, Henry & Son
William Mac Devitt	Mac Devitt, William
Waterbury Watch Co.	Waterbury Watch Co.

Assignment on Alphabetizing:

1. Using the above model, arrange the names of the customers and the creditors of The McGill Company (in Chapter Ten) in strict alphabetic order, or as this list of names would be arranged if the names were used for filing purposes in the filing department.
2. Obtain from the tax collector of your town or city a list of the taxable real estate on the assessment list in your town or city. Alphabetize the list of property owners on each street. Alphabetize the list of streets. Alphabetize the list of property owners in the city or town. Begin with the names beginning with Aa, Ab, Ac, etc. Give each name a number, assigning number 1 to the name beginning with Aa. When this list is complete it will be a duplicate of the list the tax collector of the town uses in his office when he collects the taxes. Each tax bill is numbered Aa having number 1 as on the list. When a property owner pays his tax bill the collector simply turns to the number, say 3093, when the person having that number pays his tax bill. The bookkeeping is done in this book as it contains the number of each property owner's tax bill, the property owner's name, his address, the amount of tax due, and the date of payment of the tax.
3. Obtain the package of student registration cards from your teacher and alphabetize the total registration of the student body of your school.
4. The names of subscribers from your local telephone directory and the names of residents from your town or city

directory may be written on small 3″ x 5″ cards and may be alphabetized.

5. List of words from the dictionary may be written on small slips and alphabetized.
6. The list of books assigned for supplementary reading in English may be alphabetized.
7. Alphabetize all the names of the largest cities and the capital city of each state in the United States.

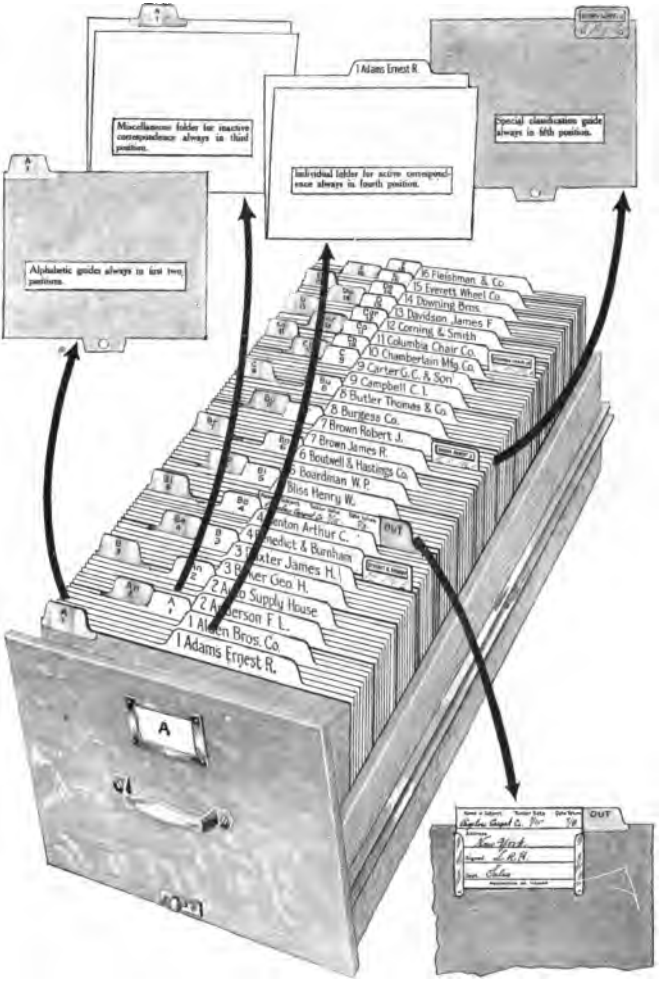
Filing

The centralization of modern business with its division into departments has resulted in a vast number of commercial papers, and the necessity for frequent reference to such papers by the different members of each department This has created the need for efficient filing methods. *Vertical filing* is the recognized system for all papers in all modern business concerns because of its simplicity and the speed with which any letter, invoice, voucher, or other paper may be found when wanted. The next point to be considered was the economy of time in getting the papers into the files or the time necessary to be spent in filing. *The four methods of filing are:*

1. *The Direct Alphabetic system*, in which all records are filed by name or subject in strict alphabetic arrangement. This system is applicable to small files or to those of any size where it is essential to keep one surname or subject together.

2. *The Numeric system*, in which the records are filed by consecutive numbers assigned to the names or subjects. This system necessitates the use of an alphabetic card index or chart.

3. *The Automatic*, which is a combination of the alphabetic and the numeric system, in which the records are filed alphabetically by name or subject and safeguarded by a numeric check. This system gives perfect distribution of the records between the guides and combines the speed and the simplicity of the alphabetic method with the accuracy of the numeric.



L. B. DIRECT ALPHABETIC INDEX

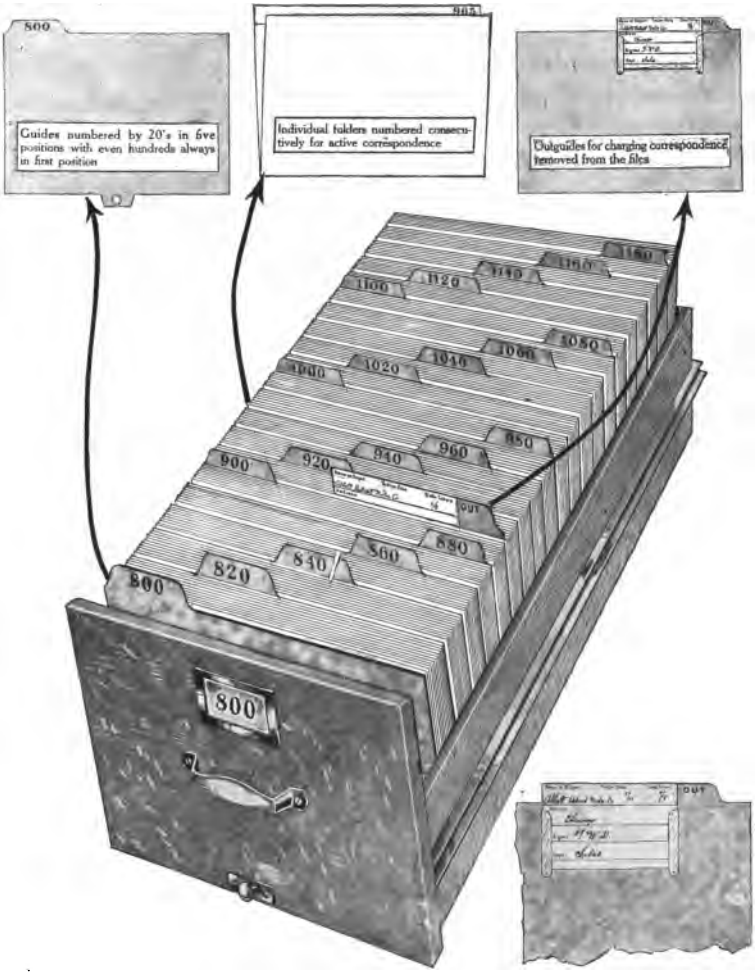
4. *The Geographic system*, in which the records are filed behind state and town or city guides, is a system for use in filing where the location of a place is of more importance than the name of the correspondent.

Alphabetic Filing

The *alphabetic method* is particularly adapted to files when the number of correspondents is small but the volume of material is heavy, or where it is essential to bring together all the correspondence with different persons of the same surname. The equipment for filing consists of pressboard guide cards for the alphabetic divisions and manilla folders for the regular correspondence of the concern.

The miscellaneous folders are intended to hold both correspondence of a strictly miscellaneous nature and the letters of an active correspondent until an individual folder is desirable. A miscellaneous folder is used for each alphabetic guide card, the lettering or division of the alphabet on the regular and miscellaneous folders being identical with that on the guide card. The printing is generally in red or black, thereby making the folder easily distinguishable from the guide cards. The miscellaneous folders may be of a different color from the regular folders for the sake of contrast when used in the filing drawer of the filing cabinet.

In filing a letter alphabetically, the proper alphabetic guide card must be located first. For example: A letter from Bennett & Company is to be filed. The guide card "Be" must first be found; the next question is whether an individual folder has been assigned to Bennett & Company? To answer this the proper location for a Bennett & Company folder in the "Be" section must be noted to see if such a folder is there. If there is none, the letter is then placed in the miscellaneous folder marked "Be," in correct alphabetic order with other letters in that folder.



NUMERIC CORRESPONDENCE FILE

Numeric Filing

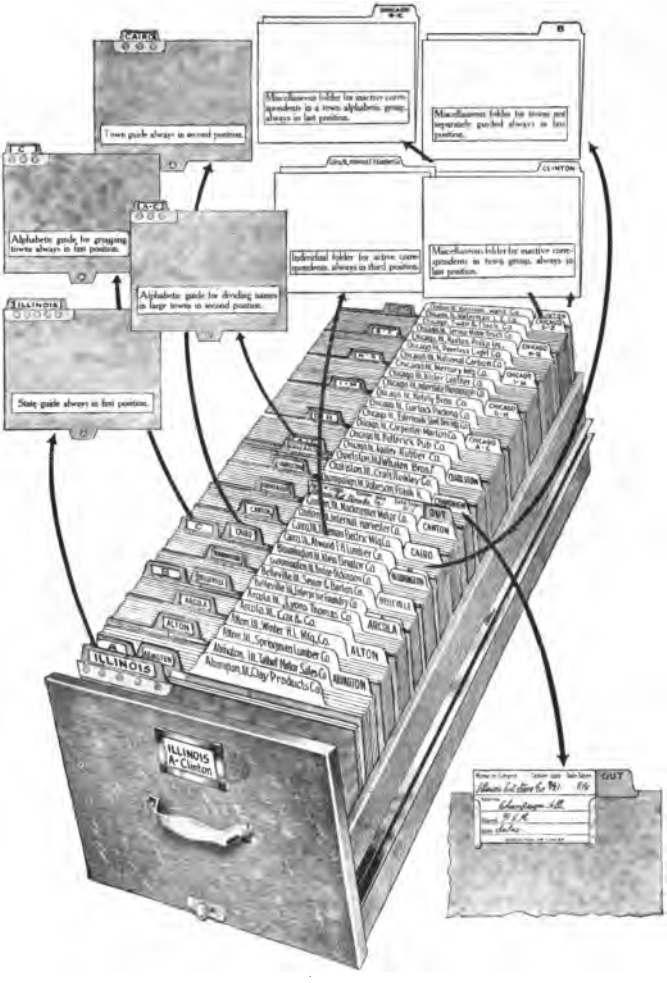
The *numeric system* is an indirect one, necessitating an alphabetic card index for filing and reference; for this reason its use for name filing has been discontinued, the alphabetic being more effective and far simpler and more rapid in operation. The numeric usually proves the most suitable method for permanent records and is desired where a large amount of cross reference is needed as in legal, architects' and engineers' files. The necessity for consulting the alphabetic card index is an aid to accurate filing. The numbering of the letters before distribution for filing is a time saver.

The card index of a numeric file system furnishes a complete reference of the list of names, addresses, and the geographic locations of all the persons or firms with whom business is transacted. A card is made out for each correspondent or the subject of the correspondence is used in making out the cross-reference card and the card bears the name, the address, the kind of business, and the file number assigned to each firm or person. These cards are filed alphabetically upon the receipt of correspondence.

Reference is made to this card index and the file number is entered in the upper right-hand corner of the letter before distribution in the filing department. Previous correspondence may be instantly obtained from the files by using the file number as all the letters are filed numerically or according to the file number.

Geographic Filing

Where exact territorial divisions are important, *geographic* filing provides a means of grouping correspondents from each town or city by itself. Credit information based on territorial divisions either by state or salesmen's or agents' territories is filed geographically. The towns and cities of a state are printed on the guide cards and the towns and cities are alphabetically



GEOGRAPHIC AND TOWN FILING

arranged behind the guide card bearing the name of the state in which those towns or cities are located. This system is sometimes used in a manufacturing concern with direct retail connections throughout the United States, or in any particular state.

Subject or Occupational Filing

The subject matter in some correspondence is often of greater importance than the name of the correspondent. In such a case a subject system of filing may be used to advantage. The geographic system is used in credit filing, as it brings together all the information regarding all the accounts in one town or city, and it is often of assistance in deciding individual credit action. The town or city guide card may show the population, the chief industries, the names of the banks, and the authorities from whom credit information may be obtained in that town. This system may also be used for sales orders as a salesman may quickly examine the orders received by mail while he was en route, and he may plan his next trip through that geographic section or district.

The advantage of a card signature record in banks over the old system of the signature book is now recognized. The card signature record contains only the depositors of the bank. New cards may be inserted alphabetically and the cards of ex-depositors may be removed without disturbing the rest of the cards. A card system has the advantage of a privacy not possessed by a signature book, since the depositor in signing cannot see the other signatures. A signature book is cumbersome to handle at the bank window, whereas a card may even be mailed for the signature of any prospective depositor who cannot come to the bank to open an account with the bank.

The Shannon File

This is the best known system of flat filing. It consists of a board on which is mounted a double arch at one end. This

arch is opened and turned backward. The invoice, sales slip, or paper to be filed is perforated at the top by inserting that end of the commercial paper in a Shannon perforator which is either attached to the bottom of the file or is used as a separate instrument. After the end of the paper or the invoice has been perforated and the arch opened, the invoice is slipped over the spindle and the arch is closed by turning the end of the arch inward, toward the spindle. The separate sheets are raised over the arch and pushed downward.

SHANNON FILE

This is a very convenient file, as it may be laid down flat on the shipping clerk's desk, hung up near his desk, and carried about the shipping department, if notations have to be made, or the clerk has to answer any telephone message in reference to any of the invoices which are temporarily filed on the Shannon file.

The advantage besides convenience in carrying it about for reference while temporarily using any commercial paper or letter is, that papers cannot be lost from the file unless they are removed from the file, and this is impossible unless the arch is opened and the ends are turned backward. This file cannot be used for any large quantity of commercial papers as the height of the arch shows the capacity of the file.

The Loose Sheet System
or
Flat Box File System

This is one of the systems used in filing which was used before the introduction of the modern vertical system of filings.

It is used for filing receipts, orders, unfilled sales slips, invoices, while being checked by the receiving department of a firm or for a small business concern where correspondence is not very extensive. The box has a hinged cover with alphabetically indexed manilla sheets a little larger than the ordinary letter paper. Each manilla sheet has a linen tab on which is printed a letter of the alphabet.

LOOSE SHEET TRANSFER CASE

This file is an inexpensive way to keep business papers in such shape that they can be readily found. The only advantage of the box file is its inexpensiveness. The disadvantages of this system are the same as those of the old-fashioned letterpress book; the letters of any one company are scattered through a number of different boxes, and they are liable to fall out of the box if it is placed on the end. These boxes are generally placed on end in a row on shelves where they become covered with dust.

Letters, invoices, vouchers, or any other information or data may be filed. *Two systems are used*, the flat and the vertical. In the *flat system* the papers are filed in a box or drawer. In the *vertical system* the papers are filed standing on edge in a vertical cabinet. These cabinets usually have four drawers in each section large enough to file the regular size business letter vertically in manilla folders. These folders keep the material in excellent condition, and the papers filed in them may be referred to immediately.

Some firms transfer all their letters from the files every six months. The drawers of each vertical filing cabinet contain either a set of alphabetic guides, a set of numeric guides, a set of geographic guides, or a set of subject guides. The guides depend upon the system used by the company. The follow-up

system is used by all firms, but is usually used in a card index file, or desk tickler system.

The alphabetic guide cards are of two kinds—the plain alphabetic, containing a guide card for each letter of the alphabet, and the divided alphabet which allows for a greater division of the alphabet, as explained in this text.

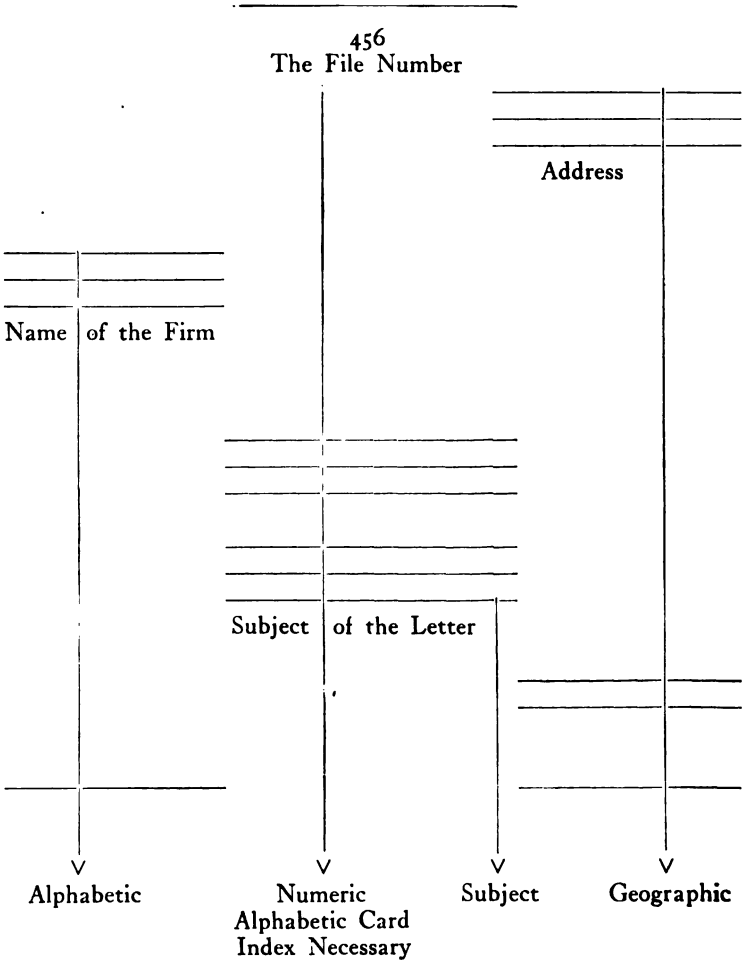
CORRESPONDENCE UNIT FILING CABINET

The numeric guide cards are usually divided into sections of tens, as 10, 20, 30, 40, 50, 60, 70, 80, 90, 100.

The geographic guide cards are divided by states. Back of each state is a set of guide cards for each town or city in the state. For example: There is one guide card for the State of New York, and following this card is a guide card for every city and town in the State of New York, these being arranged alphabetically.

The follow-up guide cards are arranged for each month in the year as January, February, March, etc., and a set of cards numbered from 1 to 31 for the days of the month. If one wishes to have his attention called to a letter on the 21st of any month he has the letter or memoranda filed after the guide card marked 21, and this guide card is placed after the month on which he desires the memoranda called to his attention as November. On the 21st of November, when all the letters and the folders are

Graphic Illustration of Filing a Letter
either
Alphabetically, Geographically, Numerically
or According to the Subject



examined, he will find the letter which he desires to answer on that day.

Individual folders are assigned to a customer or creditor when he becomes a regular customer or creditor and regular correspondence is carried on with him. His name is written on his folder, the surname first, then the given name and the initial, as Harding, Warren G.

When one is not a regular correspondent of a firm, and when only a few letters from a person are received, his letters are filed in a *miscellaneous folder* which is usually of a different color from the individual folders in the filing cabinet.

When letters or invoices are removed from the files for any reason the removal of the letter must be noted on the Out Card, as explained later.

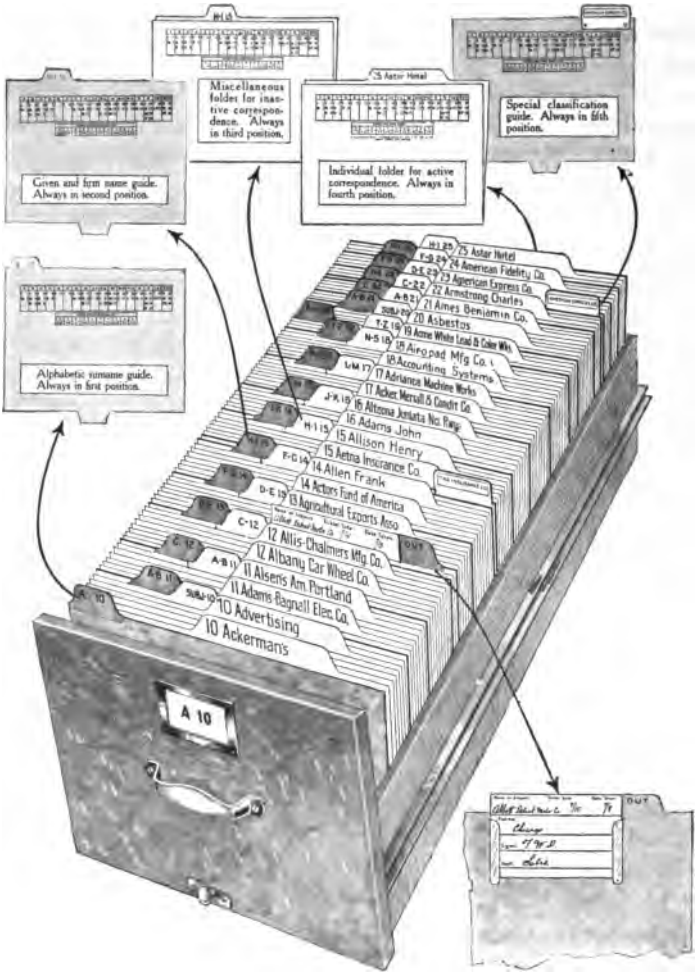
The Automatic Index System of Filing

This is an Alphabetical system with a Numerical check. The alphabet is divided into different sections for filing letters or cards by the surname or family name. They are supplied with 10, 20, 40, 60, 80, or 125 divisions of the alphabet for filing by the surname or the first name of a firm or subject.

On the guide card or folder of each division the alphabet is divided into nine sections for filing by the given name or the second name of a firm or subject.

The numbers assigned to the correspondence or cards are determined from a chart printed on each guide card or folder. The larger of the two keys or divisions of the alphabet on the card or folder is for the file number of the surname or first name of a firm or subject, while the smaller division (nine) of the alphabet is for the file number of the given name or second name of the firm or subject.

This method of filing also provides a group number for filing and refiling letters and folders.



L. B. AUTOMATIC INDEX

The *ten* division follows:

Surname Key

A 1	B 2	C 3	D-F 4	G-H 5	I-L 6	M-N 7	O-R 8	S 9
			T-Z 10					

Given Name Key

O Single Names	1	2	3	4	5	6	7	8	9
	A-B	C	D-E	F-G	H-I	J-K	L-M	N-S	T-Z

The *twenty* division follows:

Surname Key

A 1	B 2	C 3	D 4	E 5	F 6	G 7	H 8	I-J 9	K 10	L 11
M 12	N-O 13	P-Q 14	R 15	S 16	T 17	U-V 18	W 19	XYZ 20		

Given Name Key

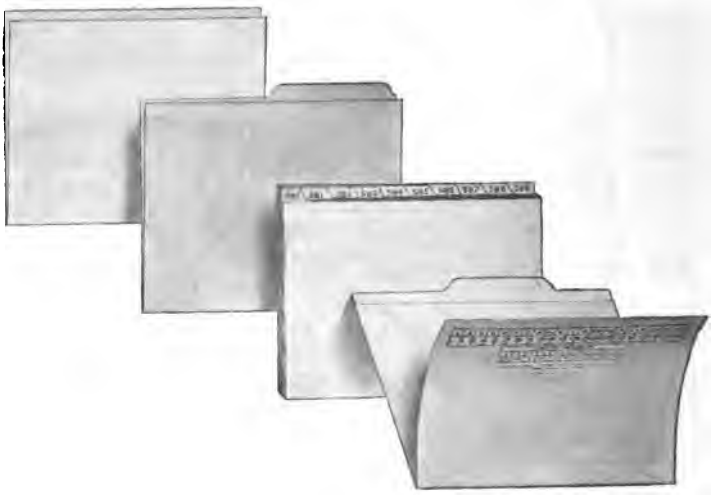
O Single Name	1	2	3	4	5	6	7	8	9
	A-B	C	D-E	F-G	H-I	J-K	L-M	N-S	T-Z

One can easily see from the examples given that the surname key changes with the different divisions of the alphabet while the given-name key remains the same, in each case of division, having only nine divisions for the given-name file number.

To illustrate the use of this system take the name John Smith and file a letter or card from him under the *ten* division and then under the *twenty* division.

To File Under the Ten Division Automatic System:

Smith—the surname is under the file number 9.
John—the given name is under the file number 6.
Therefore the file number for all records from John Smith under the automatic *ten* division is *96*.



FOLDERS

To File Under the Twenty Division Automatic System:

Smith—the surname is under the file number 16.
John—the given name is under the file number 6.
Therefore the file number for all records from John Smith under the automatic *twenty* division system is *166*.

Assignment:

1. Use the different divisions of the automatic index system and place the automatic file number on the mail received today by the incoming mail department. After deciding on the file number place the number in the upper right-hand

corner of the card or letter and circle the same. This is better if written with a red pencil, as the file clerk can see the file number immediately upon taking up the card or letter for filing.

2. After the cards and letters are ready for filing, place them in a basket on the desk ready for the messenger or clerk to take to the file department.
3. For extra practice in using this system, which is used by a number of insurance companies, the student may take the mailing list of The McGill Company and, using the twenty division of the automatic index, place the file number on a list of the names of the customers and creditors. For more practice, take the ten division, and after deciding upon the file numbers in this division, comment on the difference in the file numbers of the surnames of the two divisions. The given-name file number will be the same in both divisions.

Cross Reference and Follow Up

Cross reference is necessary in filing letters and cards for the reason that many times a letter contains more than one subject, and as a letter or paper cannot be filed in more than one place, some provision must be made to find it, should it be asked for under one of the other subjects.

For example:

A Letter from

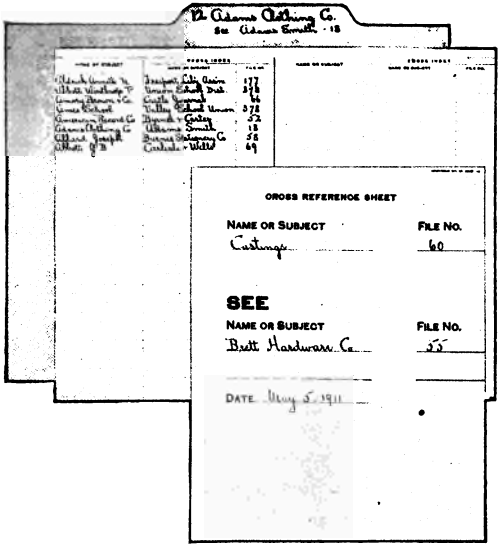
Camp Devens, Mass.
July 21, 1918

To the Adjutant General of the Army,
Washington, D. C.

Three thousand steel helmets needed at this Camp for the proper equipment of troops for Oversea service.

Harrison.

The original letter would be filed under *Steel Helmets*, and a cross reference would be made out and the letter filed under *Camp Devens, Mass.* The first would be filed according to subject, while the other would be filed according to the geographic system.



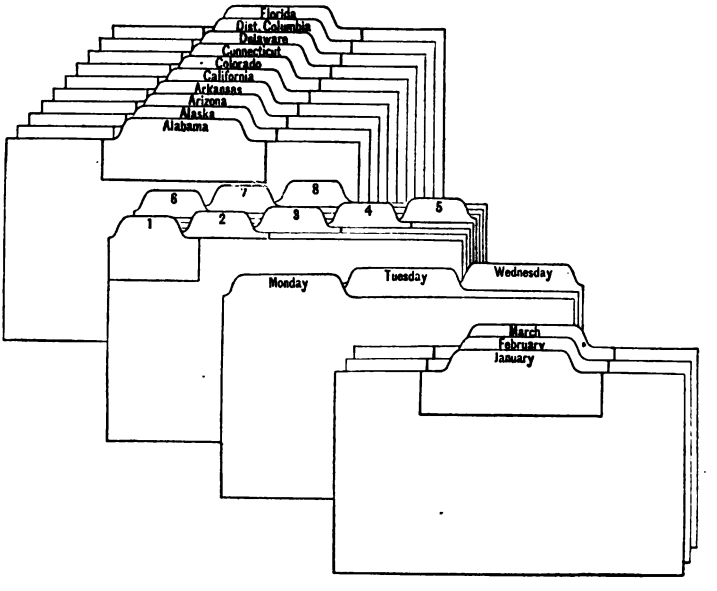
CROSS-REFERENCE SEE CARDS

This cross-reference sheet or card is always of a bright color, and is placed in the folder in place of the letter (original) or card which is filed elsewhere. It is left in the folder until the original is returned.

The Use of Tabs and Signals

Tabs or signals are small projections of different colors attached to a metal clasp. These tabs are adjustable and may be moved to any desired position on a card to classify the

record by date, subject, or location regardless of the general arrangement. The object of tabs and signals is to get extra information out of the files. The cards in themselves give us a certain desired information, while the addition of these small tabs or signals, as they are called, give more detailed information.



DAY, WEEK, MONTH, AND STATE CARDS

Insurance companies use tabs on their alphabetic cards which show the names and the addresses of their policy holders. They tab these cards to indicate the date when the premiums are due and the renewal date of the policy.

Real estate companies have an alphabetic set of cards containing the names and the addresses of the persons whose rent they collect. They tab these cards to indicate the amount of the monthly rent due from each person, the date on which this rent is due, the date on the expiration of the lease, the apart-

ments which are to let, private houses which are to rent, whether a store or a garage is to let, and any other transactions in which real estate concerns engage.

A university in New York City has an alphabetic card catalogue of all its students. To classify the students who attend the different schools of this university the alphabetic cards are tabbed as follows: The students who attend the regular day session of the university have a red tab on the right-hand top corner of their cards; blue tabs indicate the students attending the evening session, while all cards having a white tab on the left-hand top corner indicate that the students whose names and addresses are recorded on these cards were attendants at the previous summer session of the university. These summer-session students' cards are kept in the file until the next summer session, and a catalogue of that session is sent to their addresses previous to the opening of the summer school.

During the World War tabs were used on the cards of soldiers in the different camps throughout the United States to indicate passes and furloughs. The Red Cross use colored tabs for their register cards, different colored tabs for nurses, doctors, civilian relief, and the families assisted. Red tabs, for example, are used to indicate the necessary cases for assistance and immediate relief.

Some companies use cards made with small grooves which are arranged so that by a turn of the handle all the cards of a certain classification drop into a certain compartment; other houses have their tabs made so that a small wire may be inserted through the tabs of the same color and thus may be lifted out of their place in the file and used for reference.

Employees' Record Cards

The following card system is used by some companies for records of their employees:

REVERSE SIDE OF EMPLOYEE'S RECORD OF APPLICATION

Position wanted?
Stenographer

Languages spoken and written?
Italian and English
French or Spanish

Name? Hamill, Anna H.
Address? 620 West 121st Street
New York City

Nationality?
American

Single or Married?
(Check)

Occupation? Stenographer

Age? 21

PREVIOUS RECORD

Employed by	Position	Date	Salary	Refer to
A. B. Company	Stenographer	June 1918–Feb. 1920	$18.50	J. B. Foster
J. H. M. "	"	Feb. 1920–Mar. 1921	21.50	A. Williamson
X. Y. Z. "	"	Mar. 1921–Sept. 1921	24.75	M. Harrison

Remarks: Ability to take dictation in Italian, French, or Spanish. Accurate in transcription of notes. Traveled in Italy.

or Ability to take dictation in French. Transcription excellent. Has spent three years in Paris.

or Ability to take dictation in Spanish. Transcription excellent. Can take dictation on typewriter.

The opposite side of these cards contain the name, address, and the date of employment by the company, also the position held, salary, and any remarks about record, as date of leaving and known address, or the date discharged. This side is used in filing, as the name and address are at the top of the card.

The cards are tabbed to obtain desired additional information.

All stenographers' cards have a green tab on the upper left side. Typists have a red tab, those who understand Italian have a white tab in the upper right-hand corner; a yellow tab indicates a knowledge of French, while a purple tab indicates a knowledge of Spanish.

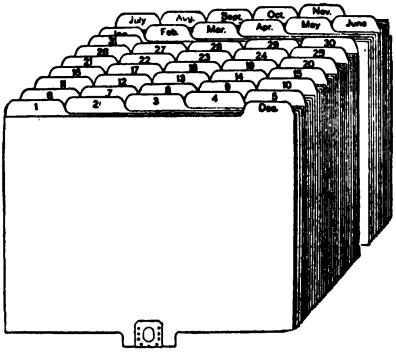
Assignment:

1. Make out employee record cards for each member of your class.
2. Use tabs to indicate stenographers, typists, and knowledge of modern languages.
3. File the cards alphabetically.

Real Estate

Assume that The McGill Company, 210 Bedford Street, Stamford, Connecticut, will conduct one section of their business as a real estate department.

The records will be kept by the card system. They desire a list of property "For Rent" and "For Sale." This list is divided into vacant lots, farms, dwellings (one and two families), business properties, loft buildings, apartment houses (elevator and non-elevator), country residences, and seashore cottages or summer homes.



FOLLOW-UP GUIDES

Signals and tabs will be used to obtain additional information from these cards.

Tabs may be used to indicate streets, private houses, apartments, differences in the rental charges, etc. For example: a red tab might indicate a private house with a garage; a blue tab might indicate a private house without a garage; a green tab might indicate a country residence near the shore; a yellow tab might indicate a country residence with water-front privileges, and the use of the private tennis court on the adjoining property.

A *follow-up* system is to be used. For example: A person may state that he is interested in purchasing a two-family house in a certain desirable neighborhood, but he will not pay more than the assessed valuation of the property, and may also state the price he desires to pay for the property described.

In such a case a card will be made out, containing the above information and the name and address of the intended client. When the agent in charge of the real estate department has any property on his list which he thinks might interest this client he either makes a personal call, or sends a description of the property. If the prospect shows interest, his card is placed in the desk tickler or follow-up file, and he is followed up until the property is sold to him or word is received stating that he does not desire to buy the real estate in question.

All rentals and all leased property are to be tabbed on cards to indicate the dates when the rent falls due and when the lease expires. These rental cards may be used as a bookkeeping record of the amount and the date when the rent is due, and when the payment is made each month by each tenant. By this method a cash account is kept with each tenant on that tenant's individual card.

The signals and tabs may be used to indicate other information such as the street, town, or city (geographical), or the numbers on a street or block (numerical).

Removal of Material from Files

After the cards have been filed alphabetically, if a card or letter is taken from the file for any reason, a requisition blank should be made out by the person who wishes to use the letter or card. This card should be placed in the folder from which one removes a letter, or it should be placed in the file if a card is removed so that anyone looking for that card may know why the card or letter is not in the file and where it may be found.

Below is a form of such a requisition blank.

Filing Department

Please give bearer the following *card* or *letter:*

Name.....

Location.....

Date.....Subject.....

Signature.....

.....Department

Another method used in some business houses is not to file this requisition blank, but simply to place the card on a small

SUBSTITUTION CARD

spike file and make an entry on a regulation size Out Card, which is always on colored paper, in order to contrast with other material in the file. After recording the data on this card it is either placed in the folder from which the letter has been removed or, if it contains a number of entries it is placed

at the front of the filing-cabinet drawer. The following form is suggested for a regulation Out Card:

1. Name of company or subject of letter or card
2. Date of letter
3. Borrower's name
4. Borrower's department
5. Date borrowed
6. A check for the return of the letter or the card, to the file, or the date of the return of the letter or card.

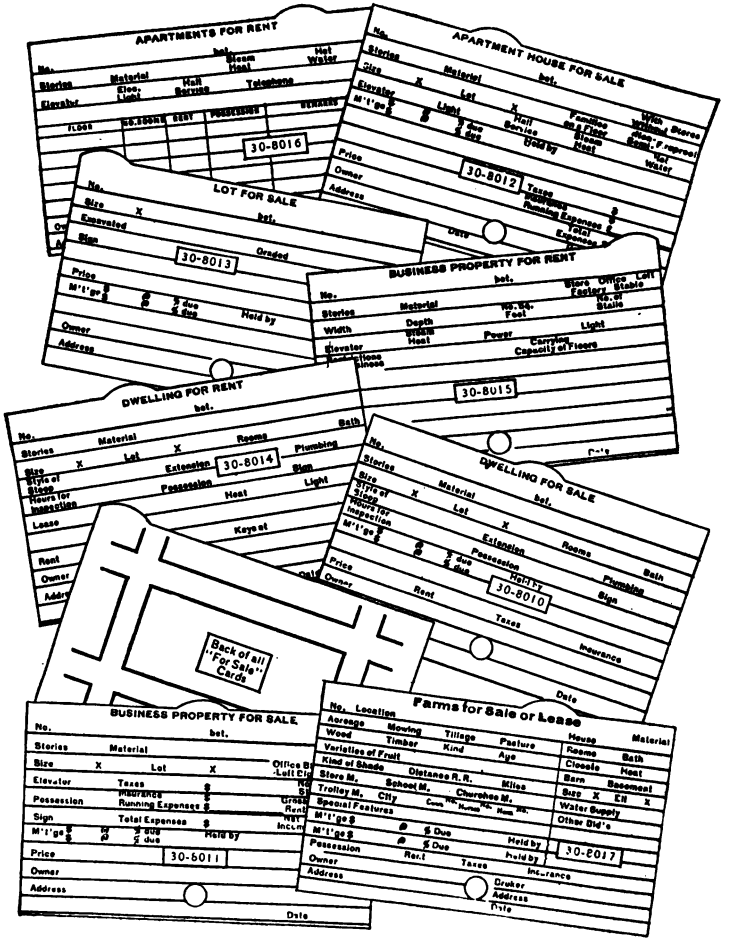
Copies of Blank Forms

BUSINESS PROPERTY

Location			
Stories	Office Bldg.	Material	Factory
	Loft Bldg.		Stable
Size			
Elevator	Taxes		Gross Rent
M't'g.	Held by		
Price			
Owner			
Address			

VACANT LOTS

Location		Size of
Graded		
Street cut and sidewalks laid		
Distance from R.R., Trolley line		
Sewage and water connections		
Gas and Electricity		
Price wanted	M't'g.	Held by
Owner	Address	



REAL ESTATE TAB CARDS

Assignment: From copies of the local newspaper select advertisements of real estate for rent and for sale. Make out cards similar to those shown on page 214 for such advertisements as you have selected.

File the cards in the small card-index drawer as follows:

a All the *For Sale* cards file in the drawer marked FOR SALE. These cards are to be filed alphabetically according to the location of the property which is for sale. For example, a piece of property for sale located on Bedford Street follows the card on which is recorded the sale of property on Adams Avenue.

b All the *For Rent* cards file numerically if the streets are numbered as 214th Street, but alphabetically if streets are named as Spring Street, Broadway.

c After the *For Rent* cards are filed, arrange them numerically as applied to each street. For example: We have two cards for Bedford Street, one 210 and one 135. These cards are filed back of the guide card B, and then we place 135 before 210.

d *Apartment To Let* cards file as stated above, numerically as to streets if streets are numerically arranged as 125th Street, 264th Street, and then as to the numbers on that particular street. If the streets are named as Main Street, Broad Street, file alphabetically, and then numerically as to the numbers on Main Street and Broad Street.

e *Farms*, file geographically, as to the state in which the farm is located, and then in the proper place for the town or city. Arrange alphabetically all the cards filed back of each town or city guide card.

f *County Residences*, file geographically as above, then arrange the cards in each city or town alphabetically and numerically if there is more than one card for any certain street.

g *Business Property*, file alphabetically for location. File numerically if more than one card for any special location.
If we desire to locate any card on which data is contained either *For Sale*, *For Rent*, *Apartment*, *Farm*, *Country Residence* or *Business Property*, we want this card so filed that same may be obtained immediately.

Assignment on Vertical Filing.

Open the folder labeled *Incoming Mail* and examine the letters and invoices marked for filing by the incoming mail clerk, and the letters marked for filing by the different heads of departments. Underline the filing name with a red pencil, as the filing name must always be indicated by underlining in red. If to be filed geographically, underline the address in red. If numeric system of filing is to be used, write the file number at the top of the paper and circle in red. If the letter is to be filed according to the subject of the letter or contents, or if the clerk has failed to indicate the subject, read the letter and decide under which subject it should be filed, and write the subject and circle same.

If the letter is stamped, "Follow up this letter December 21" file it after the guide card of that day and month.

After having examined the incoming mail for filing, the student should:

1. File all the letters assigned for alphabetical filing.
2. File all the letters assigned for numerical filing.
3. Fill all the letters assigned for geographical filing.
4. File all the letters assigned for subject filing.
5. File all the letters assigned for follow-up filing.

If an individual folder has been made out for the correspondent, file his letters in his individual folder, arranging them according to the *date* of the letter, with the latest date on top at the front of the drawer of the vertical filing cabinet.

If the correspondent is not a regular customer or creditor and an individual folder has not been assigned to him, file his letters in a miscellaneous folder and arrange all correspondence in the folder alphabetically. When customers and creditors become regular correspondents and several letters are received from them, they should have a regular folder assigned to them

and their previous correspondence must be removed from the miscellaneous folder.

All letters in the miscellaneous folders must be alphabetically arranged.

Card Index Filing

As the system of filing *cards* vertically is identical with the *letter filing*, the following will illustrate card filing: Each card index file usually contains a set of alphabetic, geographic, subject, numeric, all the months, and a set of cards numbered from 1 to 31, indicating the days of the month. Data on cards may be filed in any of these systems. A small box known as a desk tickler often contains the necessary guide cards for a Follow-up system as these small ticklers are very convenient to handle, especially for memoranda to be called to one's attention at a later date.

9-TRAY CABINET CARD INDEX.

Assignment: On small cards, size 3 x 5 inches, typewrite the list of customers and creditors of The McGill Company. On each card list the name of the firm, the address, the kind of business, and the file number.

File these cards either alphabetically, geographically, numerically, or according to the subject or the business of the concern.

When several cards are filed behind any certain guide card, as the guide card representing the state of New York, alphabetize the different towns and cities.

CHAPTER NINE

Post Office and Telegraph

Incoming Mail

Every morning all letters that have been received in the mail should be sent to the incoming mail department. Open each envelope by cutting the envelope on the *three* sides and then lay the envelope open flat on the desk in order to insure any possibility of overlooking any inclosures, such as checks, money orders, and salesmen's orders. Care should be used in properly adjusting the date stamp every morning, as the date of the receipt of a letter sometimes has an important effect on a business transaction and may aid in case of a complaint. The date and time on the post-mark of an envelope will indicate the hour of the mailing of a letter. In case of new customers the printed name of the concern on the envelope may identify the person signing the letter as signatures are sometimes difficult to decipher.

All letters should be sorted according to the departments to which they are to be sent.

Stamp each letter, bill, invoice, statement, with the date of receipt as "Received, February 9, 1921, by the McGill Company."

Put all letters and their inclosures for each department into a large envelope on which you have placed a gummed label indicating the—

Name of department .....
Name of department manager.....
Date of receipt.....
Initial of incoming mail clerk.....

All inclosures must be fastened to each letter by a clip.

A messenger boy should deliver these envelopes to the different department managers as indicated on the label.

All letters should be arranged according to the name of the persons to whom they are to be given. A typewritten slip may indicate the name of the person in the department to whom the letters are to be given, and this slip may be fastened to the letters by a clip. As the messenger boy passes through the different departments to distribute the incoming mail at different times of the day, he could collect the outgoing mail, also the mail for the other departments, and deliver it on his return trip.

Each department should have wire baskets in which the messenger boy could place the incoming mail. Another wire basket should contain the mail for the outgoing mail department.

Assignment:

1. Arrange all the incoming mail received to-day by cutting the envelopes as directed. Remove the inclosures as checks, invoices, notes, or money orders.
   Append the check, money order, or invoice to the letter by a clip and check the word "Inclosure" on the letter.
   Adjust the date stamp to the current date and stamp all the letters in the upper right-hand corner with the date of the receipt of same.
   If any letter is to be called to the attention of any special person or member of the company, stamp it:

   Call to the attention of.....
   Department

   or simply

   Attention of.....
   Department

2. Write the name of the person to whose attention the letter is to be called in ink or pencil, and the department in which

this person may be located, or use their personal stamp if one is provided.

3. Sort the letters into folders for the different departments and names of the persons to whom they are to be sent. For ease in sorting, a sorting tray may be used, as they usually contain an alphabetic set of guide cards.
After sorting the letters, place them in folders or envelopes on which a gummed label is placed as per instructions, and send the messenger boy throughout the different departments.

4. In order to retain a record of all the incoming mail of the company, make out a memorandum containing the following information concerning each letter received:

Memorandum of Incoming Mail—Date, July 7, 1921.

	Name of Firm	*Address* City and State	*Date* of the receipt of the letter	Any desired information
1—				
2—				
3—				
4—				
5—				

As the messenger passes through the different departments he must collect the letters which have been read and answered by the different department heads and executives to whom they were addressed. These letters when returned must be checked up by the incoming mail clerk by referring to the memorandum record, and then must be sent to the filing department to be filed for future reference.

If the letters are to be filed alphabetically, underline in red the name of the firm from whom the letters have been received. Look through the incoming mail which has been prepared for filing and note the letters stamped:

Bring to the attention of Mr.....

on..... date

Make out a card as follows:

Name of correspondent.....

File No.....

(The date and the name of the person who wishes the letter called to his attention on that date.

File this card alphabetically and according to date in the follow-up drawer or desk tickler. The daily inspection of the follow-up folders will present this card on the day and date on which it is to be brought to the attention of Mr.....

Go to the files and after removing the desired letter and making the necessary notation on the *out card*, send it to the person who desires it on that date.

Later, when these are returned, the record of return is to be made on the *out card* and the letters replaced in the files for future reference.

After cards are made out for all letters in to-day's mail, students must file them in a card index drawer or a desk tickler as explained in the chapter on *Filing*.

Examine our follow-up drawer or desk tickler, withdraw all cards for this date. Look up the original letters in the file department and append the card to the letter in each case.

Leave the letters with the chief clerk, who will send the messenger with them to the department in which the persons are who desire them.

Outgoing Mail

Great care should be taken in preparing letters for the outgoing mail, as these letters should convey the high standard of the firm. A slight error in formulating a letter may lose a good customer or fail to obtain a new customer. Every letter should have a personal and individual appeal to the person to whom it is addressed.

When all the letters have been signed and ready for mailing, they should be placed in the outgoing mail basket, each letter being placed under the flap of the envelope in which the letter is to be inclosed. Before placing letters in this basket, each letter should be examined for inclosures such as checks, pamphlets, printed matter, money orders, etc., and the amount of the checks or money orders should be verified. After examination for the signature and the date, fold the letters, following the directions which follow:

A business letter should always be folded neatly. It should fit the envelope snugly. Each fold should be straight.

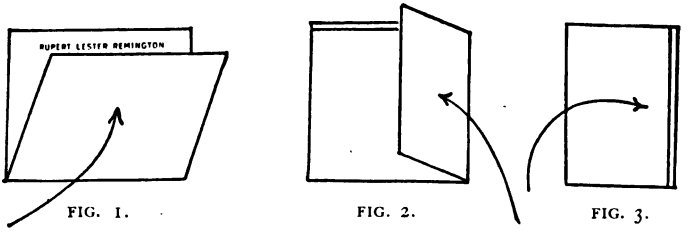


FIG. 1. FIG. 2. FIG. 3.

HOW TO FOLD LETTER

An ordinary-sized letter sheet is folded properly as follows: Grasp the lower end of the letterhead and fold upward to within 1/8 inch of the top—the slight margin at the top is left to make it easier to separate the ends in unfolding. See Figure 1. The second fold is made by folding from right to left—dividing the width of the letterhead into three nearly equal

divisions. See Figure 2. The third fold is made from left to right, leaving a little margin as shown in Figure 3, in order that the letter may be easily opened. When the letter has been properly folded and inserted in the envelope, the top should be at the left end of the envelope. Place the required postage in the upper right-hand corner of the envelope.

If it is necessary to have a letter delivered immediately upon its receipt at a post office, affix a special delivery stamp, or ten cents' worth of ordinary stamps, besides the necessary postage. (See Postal Regulations, Section 851.)

A carbon copy must be made of each letter sent out by the company. The carbon copy is typed on a plain sheet of paper while the original must be on the letterhead paper, both being typewritten at one operation. (See lesson on carbon copies, Chapter Seven.)

A valuable package containing an inclosure may be registered, or a parcel-post package may be insured. If a receipt is desired from the recipient of a registered letter or package, write "receipt requested," or no receipt will be returned through the post office to you from the one who received the same.

If it is inconvenient to send a check or stamps in a letter, one may obtain a money order at the post office for any sum not exceeding $100.00. (See Postal Regulations, Section 1123.)

Assignment:

1. Letters requiring inclosures may be placed in one section. Place the inclosures on the open letter under the flap of the envelope in which the same are to be inclosed so they may be inclosed when the letters are folded and examined for the signature.
2. Place all letters and packages to be registered and sent by parcel post in a separate section.
3. Prepare all letters, cards, packages, for mailing as per instructions.

4. Place all the outgoing mail in the outgoing mail box.
5. Send all the *carbon copies* of the outgoing letters to the filing department.
6. As in the incoming mail department, make out a memorandum of all outgoing mail as a means of checking up all letters sent out by the company and as a check on the cost of postage.

Memorandum of Outgoing Mail—Date, July 7, 1921.

	Name of Firm	*Address* City and State	*Date* of sending letter	Any desired information	Cost of postage
1—					
2—					
3—					
4—					
5—					

Metered Mail

Away back in the days of our forefathers, along with goose-quills, parchment, and sandboxes, the adhesive postage stamp came into existence. Modern business long ago discarded the goose-quill for the steel pen and later the pen for the typewriter, and has accepted the telephone, the duplicating machine, the addressing dachine, and countless other devices as an aid to business communication, but the adhesive postage stamp "still sticks."

The adhesive stamp as an institution is nearly as old as the post office itself. It came in the days of the pony express, the canal boat, and the stage coach. Prior to that time the

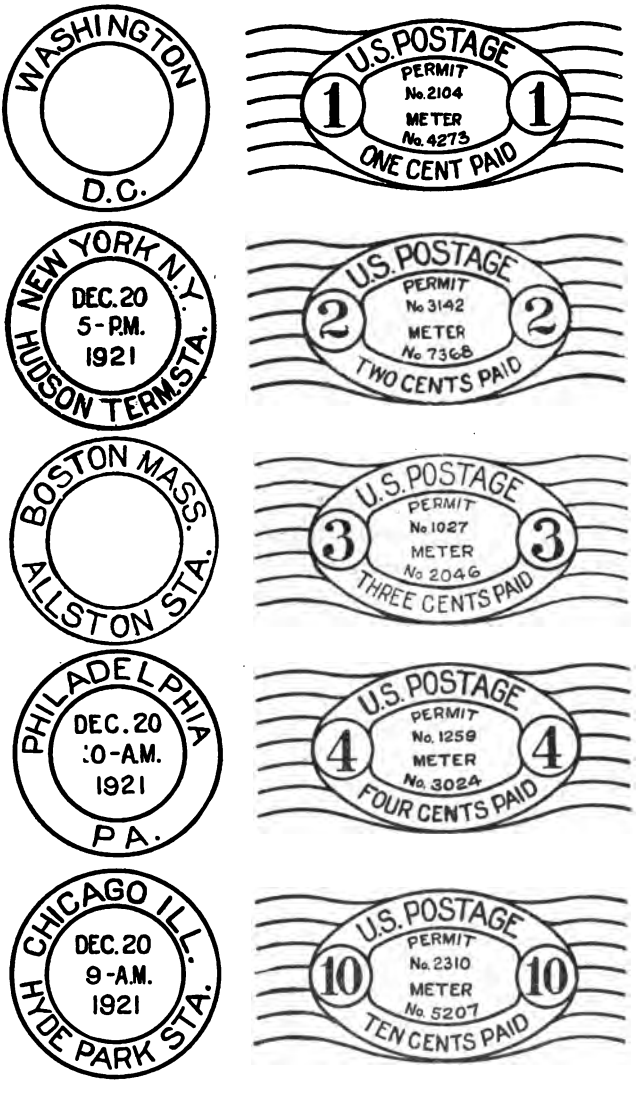
POSTAGE METER MACHINE

transportation of mail was a fairly uncertain sort of thing. The amount of postage due upon a single piece of mail was indorsed by the postmaster receiving it. The money was collected from the addressee, who had the option of refusing to accept the letter if he saw fit. When the adhesive postage stamp was first adopted by the United States Government, in 1847, it was as great a boon to business as is the POSTAGE METER which is used by many large concerns throughout the United States.

The inauguration of the Meter System as an adjunct to the postal service of the United States Government marks not only an epoch in the history of the Post Office Department, but crowns with success years of persistent effort on the part of the larger mailers throughout the country to induce the Department to authorize a substitute of some kind for the regulation adhesive postage stamp on first-class mail.

It being admitted that the adhesive stamp in reality is merely an accepted symbol or evidence of prepayment postage, and appreciating not only its impracticability, from the user's standpoint with the ever-increasing volume of mail sent out each day, but that its continued use retarded the dispatch of the mails after reaching the Post Office, the Department finally asked for and secured special legislation extending the so-called "permit" privilege to *first-class* mail, under such rules and regulations as the Postmaster General might prescribe.

Under this ruling it was suggested in the hearings of the committees that it was possible to produce a machine with a detachable meter that would print on each piece of mail matter a combination stamp and postmark, and which could be brought to the Post Office and set for the number of impressions desired. When the number of paid impressions had been exhausted, the mechanism would lock the device against further operation until brought to the Post Office and recharged. The use of such a device, it was shown, would enable the Department to collect the money in advance and incidentally save two operations otherwise necessary in facing the mail and canceling the stamps



SAMPLE IMPRINTS OF POSTAGE METERS

preliminary to the primary distribution—two operations that consume valuable time during the rush hours of the day.

It was also shown that such a device could be used on so-called "mixed" mail (not identical as to size, weight or content, but under the same classifications as to rate) on which it would be impossible to determine the correct postage per piece by average weight as is done on other classifications in which all the pieces must be identical.

Following these recommendations, the Pitney-Bowes Postage Meter was perfected and submitted to the Department, and after exhaustive tests before a committee of experts, was officially approved by the Post Office Department, September 1, 1920.

The Pitney-Bowes Postage Meter, as will be seen from the accompanying illustrations consists of two units. The pedestal contains the electric motor, driving mechanism, feed rollers, and attachment for sealing the envelopes. The detachable meter contains a counting mechanism that not only records each impression as the envelopes pass through the machine, but automatically locks the device against further operation after the number of impressions that have been paid for have been exhausted.

The Meter is provided with a printing die on which is engraved the amount of postage, permit, and meter number in combination with a post-mark, indicating the point of origin, date, hour, and year. The type in the post-mark is interchangeable and is readily accessible to the operator. The Meter is also provided with a door that is locked and sealed by the clerk in the Post Office after having been set for the number of impressions the user may desire to purchase. The glass-covered openings in the door and front of the Meter enable the user to tell at a glance the total number of impressions still available for use, thus affording a mechanical audit on the daily stamp account. The cut (p. 227) is a facsimile of the indicia authorized by the Post Office Department in connection with ap-

proved mechanical devices designed to eliminate the use of adhesive stamps on mail matter on which the amount of postage is determined by count instead of approximated weight. Separate meters for different denominations of postage printed in colors similar to those used on adhesive stamps of corresponding values, are supplied, if desired, with each machine—red for two-cent postage, green for one-cent postage.

Metered mail is sealed, post-marked, stamped, counted, and faced in one operation at the rate of 250 pieces per minute.

Information from the Postal Laws and Regulations of the United States

Sec. 393. Classification of Mail Matter: Mailable matter shall be divided into four classes—

First, Written matter
Second, Periodical publications
Third, Miscellaneous printed matter
Fourth, Merchandise.

Sec. 396. Prepayment of postage: Postage on all matter must be prepaid by stamps at the time of mailing, unless otherwise provided for according to the postal laws.

Sec. 398. Mailable matter of the first class shall embrace letters, postal cards, and all matter wholly or partly in writing. All matter sealed or otherwise closed against inspection shall be treated as first-class matter.

A drop letter is one addressed for delivery at the office at which it is posted.

Addresses upon postal cards may be either written, printed, or affixed thereto, at the option of the sender. Very thin sheets of paper may be attached to the card on condition that they completely adhere thereto.

Sec. 411. Second-class matter: Mailable matter of the second class shall embrace all newspapers and other periodical publications which are issued at stated intervals, and as frequently as four times a year.

Sec. 491. Congressional Record: The Congressional Record, or any part thereof, or speeches or reports therein contained, shall, under the frank of a Member of Congress, or Delegate, to be written by himself, be carried in the

mail free of postage, under such regulations as the Postmaster General may prescribe.

Seeds transmitted by the Commissioner (Secretary) of Agriculture, or by any Member of Congress or Delegate receiving seeds for distribution from said department, together with agricultural reports emanating from that department, and so transmitted, shall, under such regulations as the Postmaster General shall prescribe, pass through the mails free of charge. And the provisions of this section shall apply to ex-Members of Congress and ex-Delegates for the period of nine months after the expiration of their terms as Members and Delegates.

Sec. 492. Official Correspondence by Members of Congress: The Vice-President, Members and Members-elect of and Delegates and Delegates-elect to Congress shall have the privilege of sending free through the mails, and under their frank, any mail matter to any Government official or to any person, correspondence, not exceeding four ounces in weight, upon official or departmental business (until the first day of December following the expiration of their respective terms of office).

Sec. 493. Special grants of franking privilege: All mail matter carried by post to Lucretia R. Garfield, widow of the late James A. Garfield, or sent by her, under her written autograph signature, will be conveyed free of postage during her natural life.

All mail matter sent by post by Frances F. Cleveland, widow of the late Grover Cleveland, under her written autograph signature, and by Mary Lord Harrison, widow of the late Benjamin Harrison, and under her written autograph signature, will be conveyed free of postage during the natural life of each respectively.

(An article in the New York *Times* during the month of July, 1919, stated that this same privilege had been granted by Congress to Mrs. Roosevelt, the widow of our late President, Colonel Theodore Roosevelt.)

Sec. 506. Books, pamphlets, etc., for the blind: Books, pamphlets, and other reading matter in raised characters for the use of the blind, whether prepared by hand or printed, in single volumes not exceeding ten pounds in weight, or in packages not exceeding four pounds in weight, and containing no advertising or other matter whatever, un-

sealed, and when sent by public institutions for the blind, or by public libraries as a loan to blind readers, or when returned by the latter to such institutions or public libraries, shall be transmitted in the United States mails free of postage.

Sec. 523. Information not to be given: Postmasters and others in the postal service shall not give to unauthorized persons information concerning the mail matter. . . . Information concerning money orders shall not be given to any person except the remitter or payee or the agent of either or to a representative of the Post Office Department, or under special instructions from the department.

Complete or partial lists of names of patrons shall not be furnished by postmasters, post-office employees, or members of their families, but lists sent to postmasters may be corrected by the crossing off of the names of persons to whom mail cannot be delivered or forwarded, and the lists shall be returned, whether corrected or not, when stamps are sent for that purpose. New names or addresses shall not be added.

Note: Firms wishing to revise their mailing lists sometimes send their mailing list to the Post Office Department in order not to send letters and circulars to people who have changed their address and to whom mail can not be delivered. In this case the postmaster may cross off any name not on the delivery list of his post office, but he nor any other employee can not add any name or address as stated in the above postal law.

Sec. 526. Matter unsealed or in bad order: Mail matter of the first class deposited in or received at any post office unsealed or in a mutilated or otherwise bad condition shall be stamped or marked with the words "Received unsealed," or 'Received in bad order,' as the case may be, and be officially sealed before being forwarded or delivered.

Sec. 529. Times for closing mails: Mails at first-class post offices shall be closed not more than one hour, and at all other offices not more than half an hour, before the schedule time of departure of trains, unless such departure is between the hours of 9 P.M. and 5 A.M., when they may be closed at 9 P.M. At fourth-class offices day mails should not be closed until it becomes necessary, allowing a reasonable time for delivery at the train or to the carrier on star routes.

Sec. 546. Misdirected matter at mailing office: Postmasters and

others in the postal service shall not attempt to correct post-office addresses on mail matter except as provided in this section and in sections 595 and 597.

2. Mail that is misdirected as to post-office name, unless addressed to a known county and state, should not be dispatched except upon reasonable assurances to its destination (in which case it should be indorsed to show by what post office the address is supplied), but should be returned to the sender, if his name and address are known, with the words stamped or written thereon, "Returned for better direction," together with such information as the mailing office may have as to the correct post-office name. The stamps originally affixed to such matter will, when it is again presented for mailing, be accepted in payment of postage to the amount of their face value.

3. If the name of the sender is not known and the post-office address can not be supplied with reasonable certainty at the mailing office, the mail shall be disposed of as unmailable. (See Sec. 549.)

Sec. 617. Letters "Opened by or through mistake": When a letter intended for one person is delivered to another of the same name and returned by him, the postmaster should reseal the letter in the presence of the person who opened it and request him to write upon it "Opened by me through mistake," and sign his name; the letter should be then replaced in the post office.

Sec. 851. Rate on special-delivery matter: The charge for special delivery of mail matter shall be 10 cents for each piece, to be prepaid by a special-delivery stamp, or by 10 cents in ordinary postage stamps, affixed thereto in addition to the lawful postage. If ordinary stamps are used, the words "Special delivery" should be plainly written directly under, but never on, the stamps.

Sec. 1123. Offices upon which orders may be drawn: Money orders shall be drawn on the domestic form only upon all money-order post offices in the United States and its outlying possessions or dependencies, including the Canal Zone and Philippine Islands, upon the United States postal agency at Shanghai, China, and upon offices in foreign countries with which the United States transacts money-order business on the domestic basis.

Sec. 1128. A money order shall not be issued for more than one hundred dollars, and fees for domestic money orders shall be as follows—to wit: (Note: here follows the fees for domestic money orders.

FOR MONEY ORDERS

From	$ 0.01	to	$ 2.50	3	cents
"	$ 2.51	"	$ 5.00	5	"
"	$ 5.01	"	$ 10.00	8	"
"	$10.01	"	$ 20.00	10	"
"	$20.01	"	$ 30.00	12	"
"	$30.01	"	$ 40.00	15	"
"	$40.01	"	$ 50.00	18	"
"	$50.01	"	$ 60.00	20	"
"	$60.01	"	$ 75.00	25	"
"	$75.01	"	$100.00	30	"

If one desires to send, say, $110.00 by money order, a money order is made out for $100.00 and another money order is made out for $10.00; thus two separate money orders must be made out.)

Sec. 1131. Applications for money orders: The application for a money order shall be made on the printed form (No. 6001), showing the particulars required to be stated in the money order and coupon or advice.

Sec. 1153. Payment to others than persons named: A money order shall not be paid to a second person without a written transfer or indorsement of the same to such person, by the payee, in the prescribed form provided on the order.

PURCHASER MUST SEND ORDER AND COUPON TO PAYEE

After the clerk makes out the money order he retains the application blank for the files of the post office and gives the money order to the person who made out the application. The money order is sent to the person to whom the applicant owes money. The small receipt is retained by the sender.

Note: Dr. printed *after* the name of a firm to whom you owe money means you are indebted to, or owe money to, that person and is never to be considered as part of the firm name.

A common error among children is to assume that *Dr.* after a firm name on a merchandise purchase invoice is a part of the firm name and in making out a money-order blank often add *Dr.* to the firm name; for example: Henry E. Smith, Dr.

Form No. 6001

Post Office Department **No.** _____

THIRD ASSISTANT POSTMASTER GENERAL

DIVISION OF MONEY ORDERS

Stamp of Issuing Office

The Postmaster
will insert

here _____
the office drawn on, when the office named by the remitter in the body of this application is not a Money Order Office.

Spaces above this line are for the Postmaster's record, to be filled in by him

Application for Domestic Money Order

Spaces below to be filled in by purchaser, or, if necessary, by another person for him

Amount

_____ Dollars _____ Cents

Pay to Order of } _____
(Name of person or firm for whom order is intended)

_____

Whose Address is } No. _____ Street

Post Office } _____

State _____

Sent by _____
(Name of Sender)

_____

Address of sender } No. _____ Street

PURCHASER MUST SEND ORDER AND COUPON TO PAYEE

05—7156

SAMPLE

SAMPLE OF DOMESTIC MONEY ORDER

Assignment:

Make out applications for domestic money orders in favor of the following creditors for the amount due them by The McGill Company, 210 Bedford Street, Stamford, Conn. Make and file a carbon copy.

List of Creditors

			Amount Due
1.	Leonard, Walter	Bangor, Maine	$150.00
2.	Thompson, Jerome	Nashua, New Hampshire	75.00
3.	Ober, Theodore	Cheyenne, Wyoming	110.00
4.	Quinlan, Frank R.	Bangor, Maine	50.75
5.	Murphy & Henderson	Niagara, New York	25.80
6.	McNulity & Bros.	Frankfort, Kentucky	7.75
7.	Evans, Samuel	Ogden, Utah	13.50
8.	MacNeil, Thomas G.	Salem, Oregon	.79
9.	Maguire, George D.	Buffalo, New York	6.80
10.	Wilson, Sargent Co. (The)	Louisville, Kentucky	.98
11.	MacDonald & Rich (Inc.)	Providence, Rhode Island	1.25
12.	Peterson & Jamesson	Tampa, Florida	7.63
13.	Upton, William H. & Bros.	Richfield, Utah	1.35
14.	Vincent, Charles & Co.	Baltimore, Maryland	.50
15.	Silverman, George H.	Boise, Idaho	3.68

Telegrams

Telegrams are messages sent by telegraph within the borders of a country or to adjacent countries not totally separated by large bodies of water as, the United States, Canada, and Mexico.

All messages written must be in clear, concise language. As charges are by the word, messages should be sent in as few words as possible, but must clearly state the desired meaning.

To guard against mistakes or delays, the sender of a message should order the message *repeated*, that is, telegraphed back to the originating office for comparison.

The charge for this is one-half the unrepeated message rate in addition. Messages will be delivered free within one-half mile of the company's office in towns of 5000 population or less, and within one mile of such office in other cities or towns.

There are four different classes of service. The full-rate messages are paid for on the basis of a charge for the first ten words and an additional charge for each additional word in excess of ten words. They are the messages which most of us send and which are transmitted immediately. Night messages are accepted up to 2.00 A.M. at reduced rates, to be sent during the night and delivered not earlier than the morning of the next ensuing business day.

Day Letters: A deferred day service at rates lower than the standard telegram rates as follows: One and one-half times the standard night letter rate for the transmission of 50 words or less, and one-fifth of the initial rates for each additional 10 words or less.

Day Letters must be written in plain English. Code language is not permissible. The day letters may be delivered by the company by telephoning the same to the addressee, and such delivery shall be a complete discharge of the obligation of the company.

Night letters are accepted up to 2.00 A.M. for delivery on the morning of the ensuing business day at rates still lower than the standard night message rates.

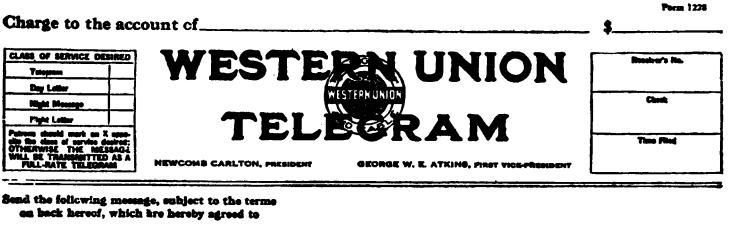
Night letters should be written in plain English. Code language is not permissible.

Night letters may, at the option of the telegraph company, be mailed at destination to the addressees, and the company shall be deemed to have discharged its obligation in such cases with respect to delivery by mailing such night letters at destination, postage prepaid.

In a telegram no salutation as "Gentlemen," or "Dear Sir," and no complimentary close as "Yours truly," or "Yours respectfully," are used. Telegrams must be typewritten; three copies being typed; the original is sent to the telegraph company, the first carbon copy is filed, while the second carbon copy is retained by the accounting department.

Transfer of money by telegraph orders, both domestic and

foreign, are accepted by telegraph companies for the immediate transfer of money by telegraph.


Form 1228

Charge to the account of _____ $_____

CLASS OF SERVICE DESIRED	
Telegram	
Day Letter	
Night Message	
Night Letter	

Patrons should mark an X opposite the class of service desired; OTHERWISE THE MESSAGE WILL BE TRANSMITTED AS A FULL-RATE TELEGRAM

WESTERN UNION TELEGRAM

NEWCOMB CARLTON, PRESIDENT — GEORGE W. E. ATKINS, FIRST VICE-PRESIDENT

Receiver's No.

Check

Time Filed

Send the following message, subject to the terms on back hereof, which are hereby agreed to

Assignment:

Read the above directions and decide upon the least number of words in which you can express the necessary data for your telegraph message. When you have the message in clear and concise language, write it on an official yellow telegraph blank. This message is to be written on the typewriter, also two carbon copies. File the copy for reference.

1. Studewell & Co., 543 Asylum Street, Hartford, Conn. We are unable to fill your order for groceries before the 15th of this month. May we substitute goods we have on hand which are similar to the ones you ordered? Wire response.
2. H. Jackson & Co., Atlantic City, New Jersey. Groceries ordered on the 5th of this month have not yet arrived from our warehouse. Shall we ship your order next week?
3. Congress Hall Hotel, Washington, D. C. Wire our salesman, Mr. Harris, to go to Boston, Mass. and call on Bowen Bros. for order of Mdse.
4. Brown & Thompson, 512-2nd Street, Louisville, Kentucky. Will complete order to-day and will ship *via* Penn. R. R. to-morrow.
5. H. Wenkenbach & Sons, 1050-5th Street, Detroit, Mich. We are wiring our factory to ship direct and make a rush order of your order of Monday.
6. H. Garrison, 2001 Tremont Street, Boston, Mass. Quote us on 40 bbls. N. S. Flour *via* N. Y. N. H. & H. R.R. Wire us when delivery can be made.
7. J. McNulty, 2124-10th Street, Chicago, Ill. Have not received

the remittance promised us on the 10th. We will send Sight Draft tomorrow.

8. Fessenden & Grant, 1002 Main Street, Atlanta, Georgia. Mdse ordered is being packed and you will receive same within a few days. Will send by freight.

9. Henry Walters, Hotel Starler, Buffalo, New York. One of our salesmen has just been elected president of the Traveling Salesmen's Association, at their Convention being held at the above address. Send him a congratulatory message.
"We have just heard of your success so well deserved and so splendidly won. Your fellow salesmen have shown their appreciation of their confidence in your ability to make their association even more successful than it is at present. You have our warmest congratulations and all good wishes."

10. Peterson & Bushnell, 456 Market Street, Philadelphia, Penn. Wire us when we may expect the invoice of mdse. we ordered by mail last Monday. Cancel our order if you cannot send the mdse to us by Saturday of this week at the latest.

Note: Send Nos. 1, 3, 4, and 7 as full-rate messages.
Send Nos. 2, 5, and 6 as night messages.
Send Nos. 8 and 10 as day letters.
Send No. 9 as a night letter.

Mechanical Devices

Many mechanical devices were used during the world war. In the offices in Washington, D. C., a device was used to replace the telephone. A message was written on a pad with a pen electrically connected with the telephone wire, with a similar pen in the office to which the message was to be sent. Answers to these messages were received by this same method.

In the War Risk Insurance office the clerical work was nearly all done by machinery. The amount of each check, the name of the person to whom it was to be paid, the address and the allotment number were placed on a plate of an addressing machine. The checks were then printed ten in a sheet with a different entry on each check.

The checks were signed by a master pen, guided by the operator, and it controlled and directed the strokes of the

other nine pens, thus signing the ten different checks with one writing of the signature.

The slitting machine cut the sheets of the ten checks, the moistening machine moistened and sealed the envelopes. The bundle tier automatically tied them in bundles and then the checks were ready for mailing to the dependents of the United States soldiers and sailors.

Besides those already mentioned, offices have automatic envelope sealers which are simple in construction and operation. The envelopes are placed one after the other over a feed plate. A crank is turned and the motion of the machine automatically moistens the flaps and quickly carries the letters through the rollers in a practically unbroken stream. The moistening device is a metal cone which always brings a uniform supply of water, thus every envelope is sure to be properly sealed.

The stamp affixer is a handy mechanical device. It is a portable safe for the office postage stamps. By a single pressure of the plunger the device performs five different hand operations: picking up, moistening, severing, attaching, and counting the stamps in less time than required for each operation when stamps are attached by hand. The register on the stamp affixer automatically counts every stamp as it is attached to the envelope or package, thus giving an absolute check upon postage expenditure and eliminating the necessity of counting each day's mail.

The Automatic Electric Typewriter such as the Hooven is used for sending out form letters in large quantities. This automatic typewriter performs every operation exactly as if it were hand operated rather than electrically, but does it five or six times as rapidly as by hand. The automatic typewriter is driven by a 1–10 horse-power motor, and is controlled by means of a paper stencil which contains the form of the letter to be written in quantities. This stencil is similar to the stencil used on a player-piano.

The paper stencil which operates the automatic typewriter

is made by striking the keys of the perforator, which has the same keyboard as any standard typewriter. When the keys are struck, instead of printing, the perforator cuts holes for the characters desired. This stencil when completed is cemented into an endless band and placed over a drum in the rear of the automatic typewriter, and then any number of circular letters may be typewritten from the stencil.

The Addressograph

The best-known device for every name-writing purpose is the *Addressograph.* It is entirely automatic; it is not necessary to feed by hand or arrange any matter to be addressed, as the envelopes are automatically placed at the printing point and addressed at the rate of 5000 an hour, then they are automatically stacked in regular order in the receiver. After printing the address plates are automatically refiled in their original order in their original filing drawer beneath the machine. These metal address plates always print legibly, thus preventing costly errors and loss or delay in shipping or mailing.

Magazines and newspapers are not always enclosed in wrappers. A lister for mailer strips, automatically feeds a narrow strip of paper from a roll, imprints the subscribers' names, addresses and the expiration dates on it, at the rate of 5000 an hour, and rewinds the strip on a second roll. This addressographed strip is then inserted into a mailer which rapidly cuts and pastes the individual address on publications.

In the War Risk Insurance Bureau, Washington, D. C., and the mailing departments of large mail order concerns, they use an addressing machine for their mailing list. Address plates are made on stencils that are cut on the typewriter. These plates are arranged alphabetically and filed. When needed for use in mailing envelopes, wrappers of magazines or newspapers, they are fed into the machine and after addressing the envelopes are replaced in the file cabinet to be kept for future use.

CHAPTER TEN

The Story of the Adding Machine

Supplementary Exercises for Class Use

The adding machine has removed the drudgery from bookkeeping and has made that vocation popular.

Before trial balances or even debits and credits were thought of man sought some escape from the drudgery of casting up figures "in their heads." Century after century, through era after era of constantly shifting civilization, the search went on. At different times the problem has occupied the minds of the great scholars of every race—the Egyptians, the Assyrians, the Chaldeans, the Greeks, the Romans, and the Chinese have all added to the study and investigation of the problem, and yet a solution seemed no nearer at the middle of the last century than it had been at the very beginning. These ages of striving for an idea merely indicated the tremendous need that has always existed for some device to relieve the human brain from its calculations.

Before mankind knew enough to put its figures in columns, simple calculations were formed by placing shells and pebbles on the ground to represent numerals. The stone-age man used the side of a cliff for his ledger sheet and a chisel and hammer for his pen. It is not at all unlikely that when Noah built the ark he chiseled the calculations of his plans on tablets of stone. Such were a few of the problems met by man before the days of the deluge when the human brain revolved at low speed. The first adding machine used by man was "four fingers and a

thumb," one hand being used to furnish the units of calculation, while the other was used as the counter. Because of this, man's sum of things was at first limited to five. There was no way to count a half-a-dozen. Present-day explorers tell us that there are certain African tribes who still know no numeral beyond five, and have no word in their language to express a higher number.

The finger and thumb adding machine was constantly improved to meet the needs of the race. One important step in the development was the adoption of both hands for units instead of one. Historians have pointed out in this connection that man's possession of 10 fingers accounts for 10 being used as the basis of our numerical system, and has given to us our present decimal system. It must not be thought finger reckoning represented a merely crude method of counting. It was highly developed by one race of people who could carry calculation into the hundreds of thousands, using practically the same system as that which has made the modern adding and calculating machine possible. The Egyptians were the first to develop any really efficient system of numerals and their mathematical application.

Babylon was the foremost commercial center of the ancient world, and the early Babylonian inscriptions show that they wrote numbers from left to right as we do to-day, while the Egyptian and the Chinaman still worked up and down. At about the time Abraham took his son Isaac into the mountains to offer him up as a sacrifice, the Babylonians invented a decimal system. The records of Babylonian business houses dated at about this time are still in existence. They were made with a sharp stylus on pieces of soft clay which were moistened to get a good writing surface and made permanent in the drying process. Babylonian business having developed more rapidly than in other parts of the world, they had difficulty in keeping their accounts. A crude form of accounting machine was made up by the use of a record board and pebbles being shifted about

on a rude surface. Excavations in Chaldea have brought to light the original loose leaf-ledger. It was nothing more or less than rows of shelves filled with wide-mouthed earthen jars, each of the jars containing these baked clay tablets.

An improvement in the original reckoning board was made by a Greek named Abax. Later we have the Abacus arranged by the Romans. Later on this was improved, the principle adopted being that of an open frame strung with horizontal wires placed at equal distances strung with perforated pebbles. The swan pan used by certain Oriental peoples to-day is very little different from the original Abacus. Little progress could be made in bookkeeping methods until the present system of numerals came into use and numbers were written in columns. The Italians seemed to have developed this particular art of accounting. At about the time the *Mayflower* sailed for America there was produced the first mechanical aid to calculation in Naples. This was Napier's rod, consisting of strips of bone bearing numbers on the surface which could be brought into fixed combinations and aided in many calculations. Later developments of this invention gave us the wonderful slide rule with all its variations that is used to-day by draftsmen, engineers, surveyors, and craftsmen of many sorts.

At about this time the principle of dial wheels bearing figures on their circumference was invented by a young Frenchman, Blais Pascal, giving various combinations of numbers that could be brought together. There has never been any particular difficulty in accomplishing mere mechanical calculations since the days of Pascal; the cyclometer on a bicycle, the counter on a printing press, and the fare register in a street car, were all made possible by this device and are, in a small way, adding machines or calculators.

The first organized attempt to produce a calculating machine was made by Charles Babbage, a professor of mathematics of Cambridge University, early in 1800. The British government appropriated almost a hundred thousand dollars

for his experiments, but the device never worked. Following the work of Babbage a host of experiementers sprang up all over Europe and considerable progress was made toward devising a means of calculation for a scientific purpose.

Not until late in the 19th century was the first adding and recording machine that became commercially possible completed by an obscure New York banker named William Seward Burroughs. In the bank this young man learned that nine-tenths of the work that is done by gentlemen who toil indoors at nice clean occupations had to do with figures, and that three-fourths of the commercial side of figures is addition, and that the human brain being an imperfect tool is incapable of sustained effort without accident. Finally when he analyzed this matter he discovered that about one-half his time was occupied in guarding against errors and half of the remaining half in hunting for errors that all his precautions had not prevented.

Adding machines are divided into two general classes. The first is the recording machine which records the result of the computation on a sheet or strip of paper, as well as accumulating the result in the dial wheels. From the recording or "listing" machine has developed the bookkeeping machine. The second classification is the key-driven or calculating machine. The difference between the key-driven and recording machine is, as the name would indicate, that as soon as the key is depressed and released the calculation is completed. The recording or listing machine further divides itself into two general classes or types; the standard full keyboard, consisting of keys arranged in columns with alternative sections colored black and white keys conforming to the decimal system of numbers, and the 10-key machines, such as the adding macines in connection with typewriting machines, etc. The key-driven or calculating machines are of two general types; the one operated by the simple depression of the keys and the other operated by a crank or lever motion.

There are a number of machines of each type under various names manufactured. These machines each perform practically the same functions as other machines of their class. It must be remembered that while the original types of adding machines were intended to do all classes of work, experience has shown that certain types of adding or calculating machines will perform a certain character of work better than machines of a different type. For illustration, 4334 can be multiplied by 4334 on the listing or recording type of machine, but the entire calculation can be made upon the key-driven or calculating machine almost before it is set up ready for multiplication on the other type of machine. Consequently the business man analyzes carefully his figure work and applies to that work the machine which is best fitted to his needs. For instance, he does not use a listing or recording machine to do the work which can be better accomplished with the calculating, or vice versa. For certain kinds of work where checking is necessary and a record should be preserved only a recording or listing machine can be used advantageously, while on other types of adding, excepting on small numbers which is merely the checking of another addition such as sales slips, frequently the key-driven or calculating is best adapted. This also follows in checking invoices and pay-roll work where the processes of multiplication and division make the key-driven machine best suited for the work. In certain types of multiplication and division, where the result needs to be carried out beyond the fifth decimal place, it frequently happens that the crank-operated calculator is best suited for the work. Any calculation that is possible with pencil and paper can be made on the adding or calculating machine, whether it is figuring interest, calculating discount, or the extraction of roots; the process is addition, multiplication, subtraction or division. A close analysis of these four processes reduced all figure work to addition.

As was shown before, 10 being the basis of our numerical system, all our figure work is based upon 10. The adding or

calculating machine offers no new principle of calculation, but follows out closely the finger methods of the ancients, handling numbers only in batches of 10 as per illustration.

```
8 x
9 x
7 x
6
9 x
4 x
5
6 x
4
9 x
5
---
72
```

9 and 5 are 14, one 10 and 4 to carry; marking the 10 we have 4 and 4 are 8 and 6 are 14, one 10 and 4 to carry; marking the 10 again we have 4 and 5 are 9 and 4 are 13, one 10 and 3 to carry; marking the 10 we have 3 and 9 are 12, one 10 and 2 to carry; marking the 10 we have 2 and 6 are 8 and 7 are 15, one 10 and 5 to carry; marking the 10 we have 5 and 9 are 14, one 10 and 4 to carry; marking the 10 we have 4 and 8 are 12. Mark the 10 and carry the 2 to the bottom of the problem and counting the 10's we find that the sum of the column of figures is 72, and at no time did we carry more than 10 numerals in the mind at one time. Therefore it is easy to see that the adding machine follows the principles of calculation used from the beginning, only relieving the mind of the drudgery of addition and the fear that some unwitting error may creep in and undo the work of hours.

Most companies manufacturing equipment of this character offer only the listing machine for all types of work or the calculating machine to handle all types of work.

Some Uses for Adding and Calculating Machines

DAILY USES

1. Proving Daily Postings.
2. Daily Ledger Balance.
3. Daily Cash Balance.
4. Preparing Deposit Slip in Duplicate.
5. Daily Recapitulation of Sales—Cash, Credit, C. O. D., etc.
6. Checking Invoices and Frieght Bills.
7. Figuring Discounts.
8. Comparing Commissions.
9. Summary of Day's Recipts and Disbursements.
10. Figuring Estimates.
11. Ledger Posting.
12. Listing and adding yardage, feet, or weight of goods packed, received or shipped.
13. Listing and adding hours and minutes, tons, and cwt., feet, inches, and fractions of inches, and other compound numbers.
14. Posting Perpetual Inventory Records.

WEEKLY USES

15. Preparing Weekly Pay Roll.
16. Making out Pay Envelopes.
17. Preparing Weekly Summaries of Labor Distributions.
18. Making Weekly Summaries of Sales by Departments, by Salesmen, by Territories, by Ledgers, by Commodities, or by any desired division.
19. Analysis of Accounts Receivable.
20. Analysis of Accounts Payable.
21. Handling Petty Cash Expenditures.
22. Compiling Change Sheet for Pay Roll.
23. Comparative Statements of Operating Expenses and Earnings.
24. Proving Traveler's Expense Reports.

MONTHLY USES

25. Taking off Trial Balance Figures, Debits and Credits.
26. Footing Ledger Accounts preparatory to taking off Trial Balance.
27. Reconciling Check Book Balance with Bank Balance, listing number and amount of each outstanding check.
28. Making Monthly Statements, giving months, date, total of debits, total of credits. Balance and special terms or characters if required.

29. Monthly Summaries of Merchandise Sales and Profits.
30. Recapitulation of Accounts Receivable and Payable for Controlling Accounts.
31. Analysis of Accounts Receivable and Payable.
32. Compiling Statement of Production Cost.
33. Compiling Statements of Material and Supplies Used.

ANNUAL USES

34. Footing inventories, calculating extensions.
35. Compiling statement of profit and loss for year.
36. Preparing of Balance Sheet.
37. Making comparative and general statistical statements.

The 81-Keyboard Non-Listing, Calculating and Adding Machine

The 81-Keyboard Non-Listing Calculating Machine has a standard adding machine keyboard on which problems in addition, subtraction, multiplication and division may be performed where a printed list of items is not necessary, where all that is wanted is the answer.

In the non-listing machine the rows of figures are divided into columns similar to the division of a ledger column. The first row of keys at the right of the keyboard runs from 1 to 9 cents, the second row of figures represent 10 cents to 90 cents, the third row 1 to 90 dollars, the fourth row 10 to 90 dollars, and so on across the keyboard to the ninth column, which is millions of dollars. All the numbers extend from one, at the bottom of the machine to the figure nine at the top. The first and second fingers of the right hand are always used when operating the keyboard. Naughts or ciphers add automatically, therefore there are no keys for ciphers.

To add by touch on the non-listing machine, proceed as follows:

1. Place a blotter or strip of paper back of the figure 5 keys.
2. Use the first and second fingers of the right hand, placing the pencil between the thumb and the palm of the hand while operating the machine. This saves time in writing down results.

3. The even numbers, 2's and 4's, are located by their smooth, flat key tops and by their relation to the 1's and the 5's. The uneven numbers 1's, 3's, and 5's, have concave or bowl-shape key tops. The 3's are located readily by their relation to the flat-top keys, 2's and 4's. The 1's are located by their concave surface and their position at the bottom of the keyboard, while the 5's are located by their relation to the 4's and to the blotter placed back of the 5's keys.
4. Add 9 by depressing 5 and then 4.
   Add 8 by depressing 4 twice.
   Add 7 by depressing 4 and 3.
   Add 6 by depressing 3 twice.
   To add 23, plus 44, plus 65, use the first and second fingers of the right hand and depress the figure 3 in the first column to the right of the machine, with the second finger, and depress the figure 2 in the second column with the first finger. The number 23 will be recorded in the window dials at the bottom of the machine. Depress 44 and 67 will appear in the window dials as 44 has been added to 23. Depress 65 and you will notice that 132 will appear in the window dials as 65 has now been added to 23 and 44, making a total of 132. When the keys are depressed they are automatically released as soon as the fingers are removed. *To clear* the non-listing machine, turn the small handle at the right once, and all naughts or ciphers will appear in the window dials.

For practice in addition on the non-listing machine, *add* the following problems in addition:

a	b	c	d	e	f	g
10	23	94	76	14	12	87
12	43	63	45	53	35	32
21	45	78	57	17	25	25
22	53	83	56	41	42	64
23	55	12	88	25	15	58
21	35	33	89	31	53	75
12	54	85	44	25	78	33
33	35	62	66	23	49	47
34	42	75	57	27	57	25
35	34	86	49	52	25	68
45	45	93	80	25	71	89
44	32	35	45	35	30	97
54	33	57	32	42	25	77
33	24	13	78	29	20	98

10-Key Adding-Calculating Machine

"Clear Machine First"

ADDITION

To list and add, depress figures on the keyboard in the same order as if writing them with a pencil, then pull the lever.

	*
125	75
87	50
105	05
25	00
	15
130	05
	5
55	55
245	75
775	30*

EXAMPLE: To list and add the figures shown on margin to the left. Clear the machine. Depress keys 1, 2, 5, 7 and 5, and pull lever. Depress 8, 7, 5 and 0, and pull lever. Continue in the same manner until all the items are listed and printed.

To Take a Grand Total

Before taking a total, always pull the lever once for *a blank stroke*. Push in the total key with the thumb of the right hand, holding it in until the lever has started forward. The total will be printed in red and designated thus, *.

DALTON CALCULATOR

For practice on a 10-key machine or on the 81-keyboard machine add the following:

a	b	e	d	e	f	g
25	35	14	234	117	154	2253
37	41	41	123	127	263	3212
45	37	25	332	128	352	3434
50	73	35	221	227	451	2345
37	47	18	134	228	511	1432
89	35	71	245	337	512	2255
52	52	29	232	338	523	3423
19	18	92	343	349	534	1567
40	49	28	121	339	545	2366
25	90	62	333	297	517	4477
30	25	27	345	279	537	3554
20	30	75	454	107	548	3523
15	40	39	543	208	559	4224
42	26	95	432	309	543	4354
54	05	38	321	411	555	2535
28	95	53	125	412	198	2422
16	30	49	235	423	289	3366
47	20	15	445	434	378	1626
52	15	10	334	343	387	1411
28	18	50	223	242	478	2135

a	b	c	d	e	f
$170.91	$107.36				
58.45	.76	$63.55	$168.76	$37.21	$37.21
26.23	49.63	12.60	56.40	17.75	.75
61.67	37.43	77.00	6.61	47.75	47.52
23.89	6.42	4.24	65.40	49.77	36.26
38.52	32.44	17.31	27.40	45.20	45.15
29.75	50.59	6.08	4.52	84.94	71.66
6.72	421.62	11.76	29.74	9.44	101.75
4.25	.45	18.10	40.70	8.65	18.65
148.39	8.93	1.80	4.25	3.49	23.19
20.00	10.00	48.49	41.64	9.72	7.92
46.26	21.16	.89	20.00	63.22	63.22
37.33	14.98	23.21	32.52	58.50	58.50
.37	5.33	21.96	27.58	38.41	37.60
1.63	13.64	4.04	9.37	75.55	54.95
26.48	27.70	7.90	25.70	81.75	65.40
21.55	6.17	5.71	24.17	72.77	72.00
1.00	94.11	6.57	35.70	4.83	19.14

23.30	30.54	15.00	200.30	136.70	104.83
1.00	12.80	15.35	11.54	19.14	200.00
37.11	7.28	18.18	111.04	.22	136.70
112.20	.37	6.50	13.78	17.56	85.29
13.78	31.03	1.25	.42	32.28	17.56
1.62	1.88	20.61	51.64	.87	32.28
51.64	1.80	2.55	1.88	35.94	103.54
1.88	39.35	19.32	4.35	68.58	43.62
4.35	28.16	27.20	58.67	.96	68.58
58.67	71.17	4.30	55.36	24.00	99.30
.36	7.98	9.88	4.96	55.52	24.00
3.30	8.40	.52	8.50	2.49	35.52
80.26	13.25	13.22	15.12	45.15	22.00
8.50	179.10	13.14	6.37	9.09	45.15
21.62	33.45	63.43	39.51	26.13	9.09
26.37	12.45	5.19	60.78	49.00	26.13

1	*	*		123,456.78
2		11.22	*	234,567.89
3	.21	22.33	12.21	345,678.90
4	.32	33.44	23.32	456,789.00
5	.43	44.55	34.43	567,890.00
6	.54	55.66	45.54	678,900.00
7	.65	66.77	56.65	789,000.00
8	.76	77.88	67.76	890,000.00
9	.87	88.99	78.87	900,000.00
	.98	99.11	89.98	
	.19		91.11	

*				*
.12		*		876,543.21
.23	*	22.11	*	987,654.32
.34	3.21	33.22	12.31	98.765.43
.45	4.32	44.33	23.42	9.876.54
.56	5.43	55.14	34.53	987.65
.67	6.54	66.55	45.64	98.76
.78	7.65	77.66	56.75	9.87
.89	8.76	88.77	67.86	.98
.91	9.87	99.98	78.97	.09
	1.98	11.99	89.18	
	2.19		92.19	

*		*		
1.23				1,122.33
2.34	*	112.33	*	2,233.44
3.45	43.21	223.44	21.12	3,344.55
4.56	54.32	334.55	32.23	4,455.66
5.67	65.43	445.66	43.34	5,566.77
6.78	76.54	556.77	54.45	6,677.88
8.91	98.76	778.99	76.67	8,899.11
9.12	19.87	889.11	87.78	9,911.22
	21.98	991.22	98.89	
	32.19		19.91	

*		*		*
12.34				12,233.44
23.45	*	10.02	*	23,344.55
34.56	543.21	20.03	12.00	34,455.66
45.67	654.32	30.04	23.00	45,566.77
56.78	765.43	40.05	34.00	56,677.88
67.89	876.54	50.06	45.00	67,788.99
78.91	987.65	60.07	56.00	78,891.22
91.23	219.87	80.09	78.00	91,122.33
	321.98	90.01	89.00	
	432.19		91.00	

*	*	*	*	*
56.46	77.66	868.67	313.47	89,767.49
34.24	99.88	676.34	745.74	67,545.66
78.78	24.35	353.56	565.67	54,232.25
45.45	46.68	667.65	343.24	65,056.06
34.23	58.69	454.68	464.53	70,500.07
89.89	23.23	456.43	756.56	65,350.03
68.46	44.34	634.34	123.12	46,060.79
23.56	77.55	867.56	232.35	76,050.07
34.12	35.36	754.34	544.56	65,405.98
57.46	57.67	367.89	333.45	87,660.67
35.68	99.77	234.56	453.42	91,919.19
14.13	11.33	323.89	674.53	19,191.91
56.45	26.48	567.89	246.35	64,336.05
44.34	38.59	434.12	794.51	75,000.76
77.56	65.86	167.45	545.67	60,000.06

33.22	47.24	245.34	634.34	58,547.73
11.44	53.65	334.23	654.23	79,863.47
33.77	46.76	489.89	342.45	63,120.61
66.88	45.65	535.35	655.78	29,757.65
46.46	23.43	635.13	742.46	53,231.38
57.13	67.44	746.23	533.35	87,674.65
68.78	55.33	143.34	342.35	96,764.63
*	*	*	*	*
34.23	656.76	1,231.34	324.66	50,605.70
78.56	445.44	2,333.46	650.68	30,400.72
34.79	545.79	3,225.67	760.55	20,704.09
56.45	751.24	4,434.58	405.08	80,020.06
24.23	336.79	5,212.35	760.54	86,006.78
64.24	655.76	6,567.67	456.54	40,450.45
32.43	466.35	7,657.79	343.44	54,023.07
88.76	336.78	8,655.68	705.07	76,045.04
46.55	876.44	9,545.45	466.07	13,030.23
65.43	455.47	6,454.55	317.89	42,032.30
77.66	343.45	9,866.44	750.56	50,506.07
34.23	456.34	7,867.56	455.60	65,070.08
78.78	123.12	4,534.23	606.04	70,000.08
77.66	223.21	1,212.45	333.02	40,530.40
24.11	334.56	4,332.34	667.07	23,304.40
35.45	545.66	7,554.55	908.60	64,045.08
67.57	643.45	4,564.37	303.32	70,550.06
78.78	989.68	8,784.58	205.50	58,066.77
34.34	556.57	6,767.34	678.47	67,605.06
35.12	232.34	3,434.56	453.04	56,024.03
45.54	535.43	6,676.77	635.07	35,045.02

2637	2162	850	8126	330	36
5867	345	188	5164	162	1378
11220	3711	100	2330	100	2155
2648	163	37	3733	4626	2000
14839	425	672	2975	3852	2389
6167	12663	5845	17091	1245	4443
17910	1323	840	798	7117	2816
3935	180	188	3103	37	728
9411	3054	1280	617	2770	1364
533	1498	2116	1000	893	45
4262	559	3244	642	3643	4963

76	10736	519	6343	1314	1322
52	988	330	2720	1932	255
2061	125	650	1818	657	1500
1533	571	799	404	2196	2321
89	4849	180	1810	1176	608
1731	424	7700	1260	6355	16877
6078	3951	637	1512	850	495
5536	5867	435	188	5164	42
1378	11104	3570	2130	1154	2417
2570	937	2758	3252	2000	4164
425	4070	2975	452	2740	6540
661	5640	16876	98264	4900	2613
909	4515	249	5552	2400	96
6958	4594	87	3228	1756	22
483	13670	1914	7277	8175	7555
3841	5850	6322	972	349	865
944	7494	4520	4977	4752	1775
3721	79281	4976	2613	909	4515
2200	5552	2400	9930	6958	4362
10354	3228	1756	8529	10483	20000
13670	1914	7200	6540	5495	3760
5850	6322	792	2319	1865	10175
7166	4515	3626	4752	75	3721

*	*	*
1122 33	23384 57	30766 45
2233 44	34457 66	68993 04
3344 55	45566 75	93947 70
4455 66	56657 84	20636 78
5566 77	67748 93	42948 23
6677 88	78839 02	58551 93
7788 99	89920 11	40325 63
8899 00	90019 00	89709 50
1928 37	56748 39	89994 71
2837 26	47389 20	31953 33
3746 15	38290 19	48139 65
4655 04	29101 00	26254 17
5564 93	10090 99	86219 59
6473 82	21543 76	51343 77
7382 71	32654 87	98033 07
8291 60	43765 98	14281 91

9100 59	54876 09	18581 56
6547 38	65987 10	67062 82
5468 27	76098 01	45025 98
4359 16	87109 90	52134 83
3240 05	98090 01	99305 92
2130 95	90123 84	94406 26
1029 83	89234 75	87620 23
8765 45	78345 66	95757 69
7654 32	67567 57	74901 74
6543 21	56678 48	13001 57
5432 10	45789 39	35360 04
4321 09	34890 20	68592 19
3210 98	23901 19	68657 42
2109 87	12092 08	77528 36
1098 76	10293 48	46169 11
6543 09	29384 57	26766 39
1234 56	38475 66	99935 49
4567 09	47566 75	52415 42
2145 76	56657 84	98974 03
3987 20	65748 93	62315 47
3456 87	74839 02	13618 03
1254 67	83920 11	32679 13
6291 56	92011 00	11776 51
8016 45	61728 39	80214 94
2569 23	52817 20	92136 92
7432 98	43906 11	97456 91
3905 12	32015 02	26185 06
7234 98	25924 83	77084 01
3926 15	10293 48	64985 10

Vertical and Horizontal Adding

Check by adding the two sets of totals.

145.67	5148.57	1382.57	1587.39
517.57	148.50	31.68	1276.39
41.69	2153.49	120.83	416.59
128.50	219.38	87.50	318.29
318.59	2741.50	317.50	41.39
675.39	123.89	1476.20	1.29
13.20	41.50	3181.49	1487.39
1.48	3189.47	815.40	4813.29

136.29	312.68	69.05	413.20
415.49	4191.28	1005.47	518.69
31.59	9147.38	316,49	87.50
106.59	318.57	219.47	139.50
51.40	51.79	1509.30	1287.39
1.59	316.59	4812.06	1483.20
3158.47	598.39	3762.17	318.20
415.48	51.49	147.48	13.20
31.68	319.57	3182.48	1476.39

Vertical and Horizontal Adding

Check by adding the three sets of totals.

$126412.80	$214621.64	$620177.25
98536.41	92684.75	516214.29
232714.18	169295.75	1019027.60
6812.00	35789.44	261426.41
982.75	18927.95	721164.74
12568.30	374261.42	289946.36
229942.78	126406.74	191472.45
8362.40	692416.24	64124.75
226491.37	742467.48	12012.40
26054.90	62145.67	916938.45
426834.72	521207.84	7518.95
82964.35	37292.20	16219.75
3594827.20	12040.00	1752.64
7960.00	7245.69	121490.75
86521.46	36047.46	69876.62
754376.50	694116.52	724138.75
1016823.25	721205.11	126421.26
62943.12	62147.01	217221.64
4836.90	741627.03	69214.75
927859.46	621264.75	211169.41
26258297.74	69128.60	99940.69
126129.45	120156.39	72126.73
968528.17	992017.29	251327.14
14912.18	121202.60	1626.47
251927.86	101427.65	7212.45
46532.45	241659.64	418.37
22614.92	69398.95	158739.27

Adding Fractions

Where common fractions are to be added frequently, the use of a fractional machine simplifies the operation.

All calculators and adding machines are built in 4ths, 8ths, and 12ths fractional models.

A special machine for handling English Currency is also furnished (known as the sterling machine).

Note: The fractional section of machines cannot be used for multiplication. Where a limited amount of fractional addition is required, common fractions may be converted into decimals and added on a standard keyboard.

Common Fractions

Decimal equivalents of common fractions on this page should be memorized. Change fractions to decimal equivalent before adding.

4ths. 1/4 = .25 3/4 = .75

1/2 = .5

3rds. 1/3 = .3333

2/3 = .6667

Add	34 1/2	21 3/4	30 1/4	Add	36 1/3	57 1/3	51 2/3
	432	35	12 3/4		57 3/4	112 2/3	227
	98 1/2	45 3/4	13		98 2/3	394 2/3	49 3/4
	51 1/4	32 1/4	5 1/2		145 4/8	152	85 1/3

6ths. 1/6 = .1667 5/6 = .8333

2/6 = .3333

3/6 = .5

4/6 = .6667

8ths. 1/8 = .125 5/8 = .625

2/8 = .25 6/8 = .75

3/8 = .375 7/8 = .875

4/8 = .5

Add	54 1/6	26 1/2	31 1/6	Add	27 1/6	58 1/4	79 1/8
	27 1/4	45 1/3	89 2/3		139 3/8	47 5/6	49 3/8
	31 2/3	53 3/4	17		241 5/6	42 3/4	52 7/8
	51 5/6	69 1/6	38 1/3		189 1 4	53 1/6	78 5/8

12ths. 1/12 = .0833 4/12 = .3333 7/12 = .5833 10/12 = .8333

2/12 = .1667 5/12 = .4167 8/12 = .6667 11/12 = .9167

3/12 = .25 6/12 = .5 9/12 = .75

Add	52 1/12	56 1/4	79 1/3	139 5/12	52 7/12
	37 2/4	95 1/3	136 1/8	30 5/8	397 2/3
	75	42 2/3	84 3/4	694	61 11/12
	41 3/4	153 1/2	27 5/6	27 11/12	154 1/4

Multiplication on the 81-Key Calculating Machine (Non-listing)

Multiplication is another form of addition—9×3 equals 27. This result may be obtained on the calculating machine by adding 9 three times as 9 plus 9 plus 9 equals 27, or by adding 3 nine times as 3 plus 3 plus 3 plus 3 plus 3 plus 3 plus 3 plus 3 plus 3 equals 27. In the first method we depressed the nine key on the keyboard three times, while in the second method we depressed the three key nine times. One can readily see the first method gives greater speed in the operation. This same idea is used in multiplication on this machine.

Multiply the following on the non-listing machine:

Example:

Multiply 345 by 57

Place the first and second fingers on the keys that represent 57. Depress these 5 times. Move the fingers one column to the left (holding 570) and depress 570 four times. Move the fingers another column to the left (holding 5700) and depress 5700 three times. The operation is now complete and the result, 19665, appears on the adding dials at the bottom of the machine.

Multiply the following. Verify all the extensions on all the invoices received in the bookkeeping department.

a 563 by 57	b 45 by 56	c 683 by 35	d 386 by 89
457 by 23	67 by 35	276 by 35	307 by 25
606 by 89	64 by 87	543 by 85	286 by 76
478 by 36	45 by 23	379 by 42	322 by 86
425 by 46	36 by 63	275 by 66	648 by 98

e 326 by 94	f 678by 56	g 756 by 54
498 by 76	976 by 65	354 by 75
763 by 34	349 by 43	657 by 56
345 by 89	326 by 92	568 by 76
756 by 64	892 by 79	493 by 32
657 by 24	248 by 82	742 by 49

10-Key Listing Machine

Multiplication

"Clear Machine First"

```
      *
  5 79
  5 79
  5 79
 57 90
 57 90
 57 90
 57 90
579 00
579 00

1406 97*
```

EXAMPLE No. 1: Multiply 579 by 243. First depress the multiply key, locking it down by a slight forward pressure. Write on the keyboard the multiplicand (579). Now pull the operating lever as many times as there are units in the right-hand figure of the miltiplier (3); depress the cipher key with the index finger of the left hand; pull the operating lever as many times as there are units in the second figure of the multiplier (4); depress the cipher key again, then pull the operating lever twice for the remaining figure of the multiplier, releasing the multiplying key JUST BEFORE THE SECOND STROKE. When multiplying by the last or left-hand figure of the multiplier, ALWAYS release the multiply key just before the lever starts forward for the final stroke. Then after taking a blank stroke, take the total as in addition, which will be the product.

Note: Multiplication on the 10-key machine is very rapid and the paper tape constitutes a PHYSICAL RECORD of the work, which can be audited at a glance. Example No. 1, for instance, enables the eye to see quickly that the multiplicand was 579, and that it was multiplied two times in the hundreds column, four times in the tens column, and three times in the units column, and that the sum of the amounts must of necessity be the product.

```
      *
 79 40
 79 40
794 00
794 00
794 00

2540 80*
```

EXAMPLE No. 2: Multiply 794 by 320. If the multiplier ends with ciphers to the right, add an equal number of ciphers to the multiplicand before pulling the operating lever, then proceed to multiply as usual.

```
      *
214 30
214 30
214 30
214 30
```

EXAMPLE No. 3: Multiply 2143 by 3050. If intermediate ciphers appear between the figures of the multiplier, it is necessary after multiplying by the figure preceding the cipher to depress as many additional ciphers as there are intermediate ciphers

214 30
21430 00
21430 00
21430 00

65361 50*

in the multiplier. These are in addition to the single cipher always struck as explained in Example 1. If there is one intermediate cipher, two ciphers must be depressed; if two intermediate ciphers, three must be depressed, etc.

Multiplication by Fractions

"Clear Machine First"

235 25
235 25
235 25
235 25
235 25
2352 50
2352 50
23525 00
235250 00
235250 00
235250 00
235250 00
2352500 00
2352500 00
2352500 00

8027906 25*

To multiply by fractions, reduce the fraction to a decimal and multiply as in ordinary multiplication, always remembering to point off as many decimals in the PRODUCT as there are decimals in BOTH the MULTIPLICAND AND MULTIPLIER.

EXAMPLE No. 1: 235 1/4 x 34 1/8. 235 1/4 equals 235.25 and 34 1/8 equals 34.125. Put 235.25 in the keyboard in the ordinary way and multiply by 34.125. Point off five decimals to the right, so that the product is 8027.90625. This example is worked out in full on the margin.

Common fractions that cannot be made into round decimals can be handled in the same manner by running out two or three additional decimal points in both the multiplicand and the multiplier containing such fractions.

Multiplication Beyond the Capacity of the Machine

"Clear Machine First"

423456 00
423456 00
423456 00
423456 00
42345 60
4234 56
4234 56
423 45
423 45
423 45

1745909 07*

EXAMPLE No. 1: Multiply 423456 by 41.23. This method of multiplication utilizes the back space key and is of practical value where large decimals are being multiplied and where accuracy to the final decimal is not essential. It is also used in Division by Reciprocals reducing Division to Multiplication. As the multiplicand in this instance contains six figures and the multiplier four, the result may contain ten figures, one more than the capacity of a 9-column machine. Set up the multiplicand, adding as many ciphers as there are figures in the multiplier, less one. (If this will

make more than eight figures in all, drop enough of these ciphers to reduce it to eight, as no more than eight figures should be put into the machine.)

Set up 42345600. Depress the multiply key. Now multiply in the usual manner, but beginning with the left-hand figure of the multiplier (4). Depress the back space key once and multiply by the next figure of the multiplier (1), and so on, multiplying by the 2 and 3 and depressing the back space key once before each multiplication. Release multiply key before the final stroke as in ordinary multiplication and take total in the usual way.

Pointing Off Decimals

The number of places to be pointed off in the result is the total number of decimal places in both multiplicand and multiplier, less the number of figures omitted from the multiplicand, which can be determined by a glance at the last figures listed in making the multiplication. In this instance there are in all five decimal places, but the last figures listed (42345) show that one figure is omitted. We therefore point off only four places in the result.

Multiply the following, using either style of machine:

25	16	27	14	19	16
x3	x3	x3	x3	x4	x4
15	18	16	14	16	28	74
x5	x5	x9	x7	x5	x6	x2
4659 x 56	2534 x 63	6424 x 75	7212 x 56
1827 x 65	1324 x 85	1475 x 64	2145 x 96
2144 x 48	3432 x 69	1621 x 36	1367 x 32

Verifying Invoices

"Clear Machine First"

This example shows physical verification of

Where it is only necessary to know that the total amount of invoice is correct, it is better to multiply the number of items by the price WITHOUT taking

invoice shown on this page.

```
      *
   2 75
   2 75
  27 50
   3 25
   3 25
   3 25
   3 25
   3 25
  32 50
   1 50
   1 50
  15 00
  15 00
   1 75
   1 75
   1 75
   1 75

 121 75*
```

An audit slip same as above should be pinned to each invoice.

a total after each multiplication, thus permitting the amounts to accumulate in the machine and enabling you to take a grand total at the END or LAST multiplication, which will be the amount of the invoice. The illustration on the margin hereof is a PHYSICAL VERIFICATION of the invoice which follows; and was done by making all the multiplication BEFORE taking the total:

12	Pairs	of	Shoes	at	$2.75—	$33.00
15	"	"	"	"	3.25—	48.75
22	"	"	"	"	1.50—	33.00
4	"	"	"	"	1.75—	7.00
						$121.75

When a series of multiplications are to be made it has been found to be advantageous to lock the multiply key down. Depress keys representing the first multiplicand, multiply in the regular way and be sure to remove figures of the multiplicand from the keyboard by depressing the correction key before taking the total and then continue with the next multiplication in the same manner. It is important that the multiply key be released after the series of multiplications has been finished.

Extend the following bills and by addition find the total amount due:

16 articles @ $3.34 each	34 yds @ $2.75 each
14 articles @ 4.25 each	28 yds @ 3.25 each
37 articles @ 2.43 each	64 yds @ 4.54 each
28 articles @ 5.63 each	36 yds @ 5.85 each
364 bbls @ $2.46 each	1829 bus. @ $0.48 each
988 bbls @ 4.67 each	4276 bus. @ .98 each
640 bbls @ 3.25 each	2864 bus. @ .64 each
	2713 bus. @ .75 each
	3645 bus. @ .87 each

Multiply the following:

326 x 394	678 x 756	756 x 542	536 x 782
498 x 576	976 x 657	354 x 756	412 x 382
763 x 342	349 x 234	657 x 756	776 x 667
954 x 786	987 x 467	567 x 756	721 x 789
756 x 342	654 x 854	123 x 456	720 x 890
354 x 895	326 x 926	394 x 574	234 x 432
756 x 764	467 x 345	493 x 313	475 x 786
761 x 721	892 x 762	645 x 657	674 x 687
982 x 346	497 x 497	529 x 629	222 x 565
280 x 388	649 x 986	547 x 562	296 x 782
743 x 326	496 x 689	629 x 492	998 x 788
542 x 467	455 x 596	989 x 323	864 x 246
632 x 674	324 x 432	549 x 656	357 x 975
497 x 746	134 x 567	554 x 779	123 x 456
386 x 497	326 x 467	629 x 886	234 x 678
432 x 856	674 x 746	529 x 669	456 x 789
956 x 326	396 x 497	889 x 882	890 x 987
785 x 498	432 x 856	552 x 999	618 x 723
346 x 763	956 x 326	728 x 659	705 x 865
395 x 954	785 x 498	990 x 772	742 x 567
787 x 989	346 x 763	720 x 820	125 x 567
542 x 354	395 x 954	729 x 770	155 x 191
678 x 756	787 x 756	729 x 652	246 x 282
976 x 657	542 x 354	765 x 789	157 x 393
547 x 756	354 x 756	234 x 892	657 x 246

882 by 21	1495763 by 28	514958 by 724	384756 by 635
713 by 31	4158673 by 29	415967 by 482	495872 by 642
9702 by 42	4159673 by 26	413947 by 526	394857 by 651
3074 by 53	1495516 by 36	405967 by 512	203857 by 667
13889 by 43	4158684 by 37	915968 by 474	148573 by 672
10695 by 23	4159673 by 38	986158 by 532	148653 by 684
15408 by 24	5168674 by 39	596854 by 546	148572 by 687
14075 by 25	1495743 by 52	395394 by 557	158673 by 692
8476 by 26	1495742 by 43	159674 by 568	158674 by 703
101432 by 31	5149573 by 42	495873 by 579	158673 by 714
145056 by 32	5169654 by 57	159573 by 582	148573 by 723
156156 by 33	7859430 by 44	394857 by 591	948573 by 736
287420 by 34	7189543 by 54	915873 by 616	495874 by 742
2958674 by 35	1596765 by 46	158673 by 624	495867 by 753

Subtraction on the 10-Key Machine

"Clear Machine First"

SUBTRACTION EXAMPLE No. 1

*
245 79
130 68V

115 11*

List the minuend as for addition. Write the subtrahend on the keyboard, but before pulling the lever, depress the non-add key, holding it down until the forward stroke is completed. The subtrahend will now be designated V. Then rewrite the subtrahend, this time using the red figures on the keyboard. Depress the subtraction key and pull lever. The subtrahend will now be further designated by the sign – . The total is then taken as for addition. See example in margin to the left.

Correction by Subtraction

EXAMPLE No. 2

*
2 25
11 50
66 15
245 79 –
34 57
76 50

190 97*

To subtract an erroneous amount (see "Correction by Subtraction Key"), turn the platen until the amount to be subtracted is just above the top of the ribbon. Then rewrite the erroneous amount on the keyboard using the red figures. Depress subtraction key and pull lever. The amount subtracted will be designated by – . Addition may now be resumed. In Example No. 2, $245.79 was erroneously added, and then subtracted in this manner.

Subtraction on the 81-Key Machine (non-listing)

The small figures on the keys of the keyboard of the non-listing machine are for the use of problems in subtraction, the large figures being used for problems in addition and multiplication.

The complement of a number is the difference between that number and the next higher power of ten. The complement of 2 is 8, as 2 subtracted from 10 leaves 8 or 8 added to 2 equals 10 (10 is the next higher power of 10 in this case).

The small figures on the keys of the keyboard indicate the

complements. It is not necessary to make any mental calculation; simply depress the number less one unit, according to the small figures; the dials at the bottom of the machine will show the complement of the number. Thus to get the complement of 7 depress the small figure 6, which is one unit less than 7; for 38 depress the small figures 37; for 3467 depress the small figures 3466. (This extra one is eliminated by means of the "9" key at the top of the machine and to the left of the amount.)

To subtract on the non-listing machine observe the following instructions:

1. Put the larger number of your problem (minuend) in the machine by depressing the figures of the number (large figures).
2. Depress the amount to be subtracted, according to the small figures, less one on the right-hand figure.
3. Depress all the 9's to the left of the columns in which the complement was added.

Examples: From 456 subtract 244.

Put 456 in the machine by depressing the keys 4, 5, and 6, using the large figures.
Depress the small figures 243 (which is one unit less than 244).
Depress the 9 keys at the top of the machine to the left of the third column.
Result is 212.

Subtract the following:

3412 from 4321	3454 from 9865	6786 from 9876
4785 from 4865	2186 from 4386	4354 from 6354
6543 from 9876	2986 from 4354	4354 from 6354
7685 from 8967	1865 from 4321	5555 from 6543
4523 from 6542	4865 from 43214	6654 from 8654
9820 from 9878	6542 from 8643	7342 from 8651
31378 from 34329	2186 from 6873	1648 from 3648
5645 from 9678	4265 from 4821	6543 from 7654
74654 from 98837	4321 from 8678	4386 from 5436
2186 from 2746	2648 from 4321	7656 from 8642

Add the two columns of the Trial Balance given in Chapter Three. Is the debit side equal to the credit side? If so the books from which the Trial Balances were taken are in balance and the posting to the Ledger was correctly done.

In the Cash Accounts, add the Receipts of Cash and the Payments of Cash. Find the Balance of Cash by subtracting the total receipts from the total payments.

Subtract:

24 from 189	56 from 378	82 from 293
35 from 176	63 from 496	84 from 356
37 from 198	68 from 299	86 from 467
42 from 256	74 from 589	95 from 382
48 from 239	79 from 482	

WALES LISTING MACHINE

The listing machines are operated by depressing the keys representing the figures in the items desired and pulling the

operating handle. The result will be shown on the dials at the front of the machine, and will also be printed on the paper at the back of the machine. The machines are cleared by pulling the handle until an asterisk, star, letter T or O, or some signal is given to indicate that the machine is clear.

Supplementary Exercises

The McGill Company has customers and creditors in every state throughout the United States. The list of these business concerns with business and address follows:

Name of Firm	*Business*	*Address*
White, Frank	Grain Dealers	Delta, Colo.
Wilson, Arthur	Wood	Oakland, Cal.
Atlantic & Pacific Tea Co.	Grocers	Jackson, Miss.
Abraham & Straus	Dry Goods	Brooklyn, N. Y.
Anderson & Mead Co. (The)	Grocers	New Haven, Conn.
Davidson, John, & Son	Grocers	Topeka, Kan.
Dillon, James, & Son	Automobile.	Jefferson, Mo.
Macy & Co. (Inc.)	Wiring	Dallas, Tex.
Macy, R. H., & Co.	Dry Goods	New York, N. Y.
Walters, Henry	Woolens	Concord, N. H.
Lyons, Charles W.	Upholsterers	Topeka, Kan.
Lawrence, Louis E.	Grocer	Annapolis, Md.
Holt, Henry, & Co.	Publishers	New York, N. Y.
Harris & Givens Co.	Insurance	Waterbury, Conn.
Robinson & Gray	Insurance	North Adams, Mass
Newman, Joseph (Inc.)	Publishers	Macon, Miss.
Walman, Michael, & Sons	Grain Dealers	Topeka, Kan.
Vogel, George	Express	Dover, Del.
McGillavery	Flour & Grain Dealers	Phoenix, Ariz.
O'Brien, Frank, & Co	Plumbing Supplies	Lansing, Mich.
McConnell, Dr. R. W.	Chemists Supplies	Raleigh, N. C.
MacDowell, James	Machinery	Detroit, Mich.
Butler Brothers	Flour & Grain	Chicago, Ill.
Swift & Co.	Meat Packing	Chicago, Ill.
Bryant & Co.	Fruit Growers	Jacksonville, Fla.
Smith, The George Co.	Lawyers	Atlanta, Ga.
McNeill, Matthew, & Bros.	Chemists	Baton Rouge, La.
Oppenheimer, James, & Bro.	Ventilating	Salem, Oreg.
Smith & Jones	Printing	Boise, Idaho.
Stewart, Charles J.	Dairy Products	Rutland, Vt.

Name of Firm	*Business*	*Address*
Ziegler, Joseph	Real Estate	Akron, Ohio.
Zimmerman, Edward	Stationery	Omaha, Nebr.
Henderson, James	Real Estate	Salt Lake City, Utah.
Jackson, Thomas	Stationery	Jefferson, Mo.
Cavanaugh, Julia M.	Lawyer	New York, N. Y.
Baldwin, Serchson, & Co.	Grocers	Columbus, Ohio.
Columbus Security Co. (The)	Bonds & Securities	Columbus, Ohio.
McDevitt, Wm. E.	Tailor	Helena, Mont.
Townsend, John K.	Flour & Grain	Rawlins, Wyo.
Underhill, Francis	Printing	Dixon, Mont.
Wright, Benjamin	Bankers	Safford, Ariz.
Young, Clarence	Advertising	Milton, Mont.
O'Mara & Ormsbee	Advertising	New York, N. Y
Lewis, Maurice	Express	Austin, Tex.
Leonard, Walter	Butcher	Bangor, Maine.
Walsh, George	Flour & Grain	Key West, Fla.
Wallace, Edward	Dry Goods	Savannah, Ga.
Thompson, Jerome	Commission Merchant	Nashua, N. H.
Taylor, Henry S.	Lawyer	Augusta, Maine.
Miller, C. O., & Co.	Grocers	Portland, Maine.
Brown & Co	Accountants	Dallas, Tex.
Robinson Mercantile Co.	Furniture	Birmingham, Ala.
Ober, Theodore	Automobiles	Cheyenne, Wyo.
Gleason, James	Flour & Grain	Ogden, Utah.
Farrell, James T.	Tailor	Montpelier, Vt.
McDowell & Kenneoy	Photographers	Wilmington, Del.
MacKee, Frederick	Wiring	Hartford, Conn.
Shaw, James	Grocer	Houston, Tex.
Silverman, George H.	Flour & Grain	Boise, Idaho.
Delevan & Co. (Inc.)	Stationery	Lincoln, Nebr.
O'Neara Coal Works (The)	Coal & Wood	Harrisburg, Pa.
O'Neill Land Co. (The)	Real Estate	Philadelphia, Pa.
Quinlan, Frank R.	Potato Dealer	Bangor, Maine.
Murphy & Henderson	Fruit Farmers	Niagara, N. Y.
McNulity & Bro.	Flour & Grain	Frankfort, Ky.
Reilly, John F.	Architect	Portland, Ore.
Curtis, The Henry, Co	Engineers	Burlington, Vt.
Evans, Samuel	Commission Agent	Ogden, Utah.
Watkins, David	Advertising	Newport, R. I.
Wendal, Eugene	Furniture	Astoria, Oreg.
Williams, George	Carpets	Detroit, Mich.
Wilson, Thomas	Grocer	Selma, Ala.
Matthews, Wm. T.	Carpets	Prescott, Ariz.
O'Connell, Richard	Advertising	Hamilton, Ohio.
MacNeil, Thomas G.	Butcher	Salem, Ore.

Name of Firm	*Business*	*Address*
Maguire, George D.	Express	Buffalo, N. Y.
Wilson, The Sargent Co.	Commission Agents	Louisville, Ky.
Cahill Railway Co.	Electrical Supplies	New Haven, Conn.
MacDonald & Rich (Inc.)	Commission Agents	Providence, R. I.
O'Connell, Michael J. Co.	Accountants	St. Louis, Mo.
Palmer, Arthur R.	Woollen Goods	Adams, Mass.
Peterson & Jameson	Fruits	Tampa, Fla.
Walker, Sidney	Chemist	Lexington, Ky.
Warner, Edward	Bankers	Pierce, Idaho.
Scanlon, Michael	Printing	Atkinson, Nebr.
Robertson, James, & Co.	Grocers	Monterey, Cal.
Upton, Wm. H., & Bro.	Commission Agents	Richfield, Utah.
Vincent, Charles B., & Co.	Grocers	Baltimore, Md.
Alden, The Henry Co.	Bankers	Helena, Mont.
Arnold, Frank J.	Advertising	Pittsburgh, Pa.
MacHenry Establishment	Electricians	Denver, Colo.
O'Gorman, Wm. S.	Engineer	Los Angeles, Cal.
American Can Co.	Canning Supplies	Bridgeport, Conn.
American Lead Pencil Co.	Pencils	Hoboken, N. J.
American Printing Co.	Printers	Fall River, Mass.
Atlas Portland Cement Co.	Cement	New York, N. Y.
Brown & Sharp Mfg Co.	Manufacturers	Providence, R. I.
Brinks Express Co.	Express	Chicago, Ill.
Bryant Electric Co.	Electrical Supplies	Bridgeport, Conn.
Cadillac Motor Car Co.	Automobiles & Supplies	Detroit, Mich.
Chester National Bank	Bankers	Chester, Pa.
Corn Exchange National Bank	Bankers	Philadelphia, Pa.
Evening News Association	Publishers	Detroit, Mich.
Farmers National Bank	Bankers	Pittsburgh, Pa.
Flat Top Insurance Co	Insurance	Bluefield, W. Va.
Franklin Sugar Refining Co.	Sugar	Philadelphia, Pa.
Hackett Coal Co.	Coal	Cedar Grove, W. Va.
Holeproof Hosiery Co.	Hosiery	Milwaukee, Wis.
Kennedy Biscuit Works	Biscuits	Chicago, Ill.
Mammouth Garage	Garage	Reading, Pa.
Mellon National Bank	Banking	Pittsburgh, Pa.
National Cash Register Co.	Cash Registers	Dayton, Ohio.
National Sugar Refining Co.	Sugar	Long Island City, N. Y.
Pennsylvania Trust Co.	Bankers	Reading, Pa.
Primos Chemical Co.	Chemists	Promos, Pa.
Russell Mfg. Co. (The)	Manufacturers	Middletown, Conn.
Scranton Coal Co.	Coal	Scranton, Pa.
Splitdorf Electric Co.	Electrical Supplies	Newark, N. J.
Victor Talking Machine Co.	Victrolas	Camden, N. J.
Walworth Manufacturing Co.	Manufacturers	Kewanee, Ill.

Bookkeeping—Problems

Using the following Trial Balance:

1. Open Accounts—entering the Debits and the Credits.
2. Make a Trial Balance.
3. Close the Accounts
4. Make out a Balance Sheet.
5. Make out a Profit and Loss Statement.

Trial Balance

THE JULIA RICHMAN CORPORATION

	Dr.	*Cr.*
Proprietor's a/c		40000.00
Cash	42783.66	6289.03
Notes Receivable	1500.00	500.00
Notes Payable	660.00	1600.00
Merchandise Purchases	9687.36	
Merchandise Sales		7938.67
Furniture & Fixtures	185.50	
Expense	293.15	
Real Estate (Cost us)	1645.00	
John Rupert	735.00	30.00
Samuel Raymond	1000.00	1316.20
Henry Johnson	92.13	70.00
Reynolds & Co.		88.60
Jones & Son		749.30

In the above Trial Balance allow the following:

Furniture & Fixtures Depreciation 10%
Merchandise Inventory $500
Expense Inventory $500
Real Estate Depreciation 5%

Listing and Non-Listing Machines

APPLICATION OF ADDITION
to
TRIAL BALANCE
of
THE JULIA RICHMAN CORPORATION

Add Debits and Credits of this Trial Balance:

(If machine shows that the Debit side equals the Credit side, bookkeeper's accounts balance.)

TRIAL BALANCE
of
THE JULIA RICHMAN CORPORATION

July 12, 1921

	Dr.	*Cr.*
J. R. Corporation (Prop's a/c)		40000.00
Cash	42783.66	6298.03
Notes Received	1500.00	500.00
Notes Payable	669.00	1600.00
Merchandise	9687.36	7838.67
Furniture & Fixtures	185.50	
Expense	293.15	
Real Estate (Cost us)	1645.00	
John Rupert	765.00	160.07
Samuel Raymond	1000.00	1316.00
Henry Johnson	92.00	70.00
Reynolds & Co.		88.60
M. Jones & Son		749.30

TRIAL BALANCE
of
THE JULIA RICHMAN CORPORATION

July 20, 1921.

J. R. Corporation (Prop's a/c)	196.00	6220.00
Cash	4942.69	3358.50
Merchandise	8740.00	5065.40
Expense	450.00	
Office Fixtures	187.50	
Notes Received	780.00	254.70
Notes Payable	540.00	1046.00
Ferris & Co.	1045.00	745.00
French & Co.	198.13	75.61
Harris & Co.	72.60	487.20
Johnson & Co.	192.60	92.11

Using the following data, make out a balance sheet of present date for The Julia Richman Corporation, 421 East 88th Street, New York:

Cash on hand $987.50.
Cash in bank $458.76.
H. Harris owes us $529.50.
J. Brown owes us $873.72.
Merchandise Inventory on hand $986.75.

Accounts Receivable:

T. Black $451.21.
Rawkins & Son $386.10.
Smith & Foley $735.45.
Lane & Court $254.78.
James Talbott $143.25.
Babott & Bros. $345.78.
Brackon & Jones $251.59.
H. Hogan $974.45.
J. Avery $471.45.

Notes Receivable $396.75.
Furniture & Fixtures $263.
Notes Payable $473.56.
Mortgage Payable $875.50.
Loans Payable $526.40.
We owe J. Harrison $264.87.

Accounts Payable:

B. Black $173.89.
T. Thompson $184.65.
H. Howell $184.56.
J. Samuels $236.47.
C. Lawrence $452.68.
H. Williams $256.70.

Find the Capital or the Present Worth.

Accounting and Business Practice, First Term

1. On Jan. 1, 1920, A. H. Warner began business investing cash $3500.

   On Dec. 31, 1921, his books show the following facts:

   His bank balance is $5461.20. He has $174.78 in the cash drawer. An inventory of merchandise shows that his stock is worth $3475. He values his furniture and fixtures at $820. There are office supplies worth $35 on hand. He owes A. D. Smith $2345 for merchandise purchased during the year. S. E. Dodge owes him $365, and F. A. Walton $250. A note due at the Commercial Bank for $2500 will fall due in 60 days. He has in his possession a note signed by F. S. Good for $1500.

   Make out a Balance Sheet to show A. H. Warner's Present Worth, and Net Gain for the year.

2. Your bank balance in the Commercial Exchange Bank on May 1st was $2305.18.

   May 1st you paid rent, $75.50, to the landlord, A. C. Hart.
   May 2nd you bought of E. S. Harris 375 yards of silk a[illegible] a yard, terms 5/10 n/30.

Gave your check in full payment less discount.
May 3rd you deposited contents of cash drawer, $176.85.
May 4th deposit I. E. Wells check for $368.60.

(a) Write check of May 2nd.
(b) Show records kept by you on your check book.
(c) The bank balance as shown on bank statement is $1995.63. Make up a reconciliation statement to account for difference shown by your check book.

3. T. A. Walsh's books show the following accounts:

Purchases

Apr. 1	2328.50	Apr. 7	47.85
3	694.75		
19	468.59		

Inventory

Apr. 1	3400.00		

Sales

Apr. 20	165.20	Apr. 2	265.00
		12	1938.50
		19	2867.75
		30	3126.50

Furniture & Fixtures

Apr. 1	900.00		

Expense

Apr. 1	426.00		
15	69.85		
30	126.00		

On April 30th inventory of mdse shows $3120 worth of goods on hand. The office supplies on hand valued at $63.85. The furniture and fixtures have depreciated 10%. Close the above accounts and set up a Loss and Gain Account showing F. A. Walsh's net gain for the month.

4. Henry Collins, of Louisville, Kentucky, bought of Harrison & Smith, of Boston, Mass., on Sept. 11, 1920, on account, the following items. Terms: Net 30 days, 2% 15 days, 5%—5 days.

8 pieces of Corduroy:

26, 25, 28, 29, 30, 26, 27, 29 yds @ $1.20

4 pieces of Cashmere:

50, 53, 51, 52 yds @ $1.16 2/3

Write the invoice. Make out the check on the First National Bank if payment is made on September 5, 1920.

Sept. 1, 1920	John Harrison commenced the Flour and Grain business at 2160 Broadway, investing $3500.
" 2,	Paid rent of store $75, and $25 for stationery and stamps.
" 3,	Bought merchandise for cash $550 (50 bbls Flour).
" 4,	Bought merchandise on account from Frank Gray $25 (30 bushels Wheat).
" 5,	Bought merchandise for cash from H. Hogan $27 (25 bushels of oats).
" 6,	Mr. Harrison drew $30 from business for his own private use.
" 8,	Sold merchandise for cash $420 (25 bbls Flour).
" 9,	Sold merchandise on account to Henry Davis $32 (15 bushels of what).
" 10,	Paid salaries $150.
" 11,	Henry Davis paid us $15 to apply on account.
" 12,	We paid Frank Gray $20 to apply on account.

Merchandise Inventory $475.

(a) Enter the above transactions under the proper accounts.
(b) Prepare a trial balance of totals.
(c) Close the cash and merchandise accounts.
1. Use a separate account for Mdse Purchases.
2. Use a separate account for Mdse Sales.
3. Use a separate account for Mdse Inventory.

Edward M. Brown. Enter these transactions of Edward M. Brown in your General Ledger in the proper accounts:

Made investment $75000.

Nov.	1	Bought of A. Dean for cash 500 bu. wheat at $1.00.
Nov.	2	Sold F. Lay for cash 100 bu. wheat at $1.15.
Nov.	3	Bought of H. Barr for cash 50 bu. beans at $3.00.
Nov.	4	Sold Bell Bros. for cash 30 bu. beans at $3.50.
Nov.	5	Bought of H. Leary for cash office supplies for $15.00.
Nov.	6	Bought of Thos. Daly for cash 200 bu. millet at $1.00.
Nov.	7	Sold S. Allen for cash 100 bu. millet at $1.00.
Nov.	9	Paid John Ray cash for repair work $6.00.
Nov.	10	Bought a typewriter for cash $75.00.
Nov.	11	Bought a desk for cash $125.00.
Nov.	12	Sold J. Morse for cash 400 bu. beans at $3.00.

Merchandise Inventory $500. Expense Inventory $200.

H. Harrison began the carpet business at 410 Main Street, Buffalo, N. Y., investing cash $8500.

May	1	Bought of J. Olain for cash 60 yds velvet carpet at $1.25.
May	1	Sold A. Dale for cash 25 yds of carpet at $1.75.
May	2	Paid N. Milton cash for rent of store $75.00.
May	5	Bought of W. Jackson for cash 40 yds Brussels carpet at $1.25.
May	5	Sold W. Welton for cash 100 yds Brussels carpet at $7.50.
May	6	Bought of J. Lee on account 20 rugs at $5.75 each.
May	7	Sold J. Drew on account 10 rugs at $6.75 each.
May	8	Sold L. Hicks for cash 5 rugs at $6.75 each.
May	9	Bought of D. Pearson for cash 100 yds ingrain carpet at $8.50 a yd.
May	10	Sold A. Dervy for cash 50 yds ingrain carpet at $1.25.
May	11	Received of J. Drew cash to apply on account $25.00.
May	12	Bought of A. S. Servance for cash, $0.45 a yard, 200 yds of matting.
May	14	Sold H. Price for cash 100 yds matting at $0.60 a yd.
May	15	Sold Albert Owen on account 40 yds matting at $0.63 a yd.
May	17	Received of Albert Owen cash in full of account.

Expense Inventory, $5.00. Merchandise Inventory, $125.00.

After you enter the accounts find the *Total Cash Receipts* and the *Total Cash Payments: Balance Cash Account.*

Take a *Trial Balance:* Make a *Profit* and *Loss Statement* and a *Balance Sheet.*

After you enter the Merchandise Purchases and Merchandise Sales, find the Total Purchases and the Total Sales. Use separate accounts for each.

Edward M. Hogan began the grain business at 60 West Street, Hartford, Conn. Enter these transactions in your General Ledger in the proper accounts:

Made Investment $95000.

Nov.	1	Bought of A. Dean for cash 500 bu. wheat at $1.
Nov.	2	Sold F. Lay for cash 100 bu. wheat at $1.15.
Nov.	3	Bought of H. Barr for cash 50 bu. beans at $3.00.
Nov.	4	Sold Bell Bros. for cash 30 bu. beans at $3.50.
Nov.	5	Bought for cash, office supplies for $25.00.
Nov.	6	Bought of Thos. Daly for cash 200 bu. millet at $1.00.
Nov.	7	Sold S. Allen for cash 100 bu. millet at $1.00.
Nov.	8	Paid for repair work $9.00.
Nov.	9	Bought a typewriter for cash $75.00.
Nov.	10	Bought a desk for cash $125.00
Nov.	11	Sold J. Morse for cash 400 bu. beans at $3.00.

Merchandise Inventory, $500.00. Expense Inventory, $200.00.

H. Hodgetts began the carpet business at 410 Main Street, Buffalo, New York, investing cash $9500.

May	1	Bought of J. Olain for cash 60 yds velvet carpet at $1.25.
May	2	Sold A. Dale for cash 25 yds of carpet at $1.85 per yd.
May	2	Paid for rent of store $95.00.
May	5	Bought of W. Jackson for cash 40 yds Brussels carpet at $1.25.
May	5	Sold W. Welton for cash 100 yds Brussels carpet at $0.75 yd.
May	6	Bought of J. Lee on account 20 rugs at $5.75 each.
May	7	Sold J. Drew on account 10 rugs at $9.75 each.
May	8	Sold L. Hicks for cash 5 rugs at $6.75.

May	9	Bought of D. Pearson for cash 100 yds ingrain carpet at $4.50 a yd.
May	10	Sold A. Dervy for cash 50 yds ingrain carpet at $1.25.
May	11	Received of J. Drew cash to apply on account $35.50.
May	12	Bought of A. S. Servance for cash at $0.45 a yd 200 yds matting.
May	14	Sold H. Price for cash 100 yds matting at $0.60 yd.
May	15	Sold Albert Owen on acount 40 yds matting at $0.63 a yd.
May	15	Paid J. Lee check for $50.co to apply on account.
May	17	Received of Albert Owen cash in full of account.

Expense Inventory, $5.00. Merchandise Inventory, $150.00.

After you enter the accounts find the Total Cash Receipts and the Total Cash Payments; Balance Cash Account.

Take a trial balance, make a Profit and Loss Statement and a Balance Sheet.

After you enter the Merchandise Purchases and Merchandise Sales find the Total Purchases and the Total Sales.

1. Journalize the following transactions; post them to the Ledger; take a Trial Balance; close accounts; or enter the following in accounts:

April	1, 1921	Student commences the Wholesale Dry Goods. business, investing cash $7658.
	3,	Paid for stationery, cash $25.
	4,	Bought merchandise of H. Thomas on account, $786.
	5,	Sold merchandise to H. Martin on a note for $250.
	6,	Sold merchandise to H. Wells on a 30-day note with interest at 6% for $133.
	7,	Bought merchandise of G. Lane on our note for $598.
	9,	Received cash $178 for merchandise sold to R. Sudnik.
	10,	Received cash $345 from H. Martin for the note received April 5th.

On April 30 the merchandise on hand is estimated to be worth $878.

2. The note received April 7th, was discounted April 15th at the Chase National Bank. How much was received for it? How much was the Bank Discount on the note?

3. Write the note.
4. April 15th, A. B. Studwell, a commission merchant, received a consignment of

400 bu. of apples.
1200 bu. of potatoes.

from James L. Kirk, of Monticello, N. Y. He made the following sales:

250	bu. of	apples	@ $2.40	a bu.
150	" "	potatoes	@ $2.50	" "
1200	" "	apples	@ .80	" "

A. B. Studwell paid $7.85 for freight. Other charges were as follows:

Crating	$4.75
Insurance	$2.50
Guaranty	2%
Commission	5%

A. B. Studwell rendered an Account Sales. Make out the Account Sales.

Record the following transactions on Ledger Paper:

Jan. 1 F. L. Gleason began the grocery business with an investment of cash $4500.
2 He paid rent for one month $175.
3 Bought merchandise for cash $1800.
4 Sold merchandise on account to J. Kane $975.
5 Bought merchandise on account from K. Wagner $450.
5 Sold merchandise for cash to L. Conners $900.
7 J. Kane paid $450 by check to apply on account.
8 Paid K. Wagner $150 in full settlement of his account.
9 F. L. Gleason withdrew $480 from business for private use.
10 Bought merchandise on account from Harrison & Fisher $840.
11 Paid salaries $165.

Merchandise Inventory, Jan. 30, $2200.

Enter the transaction *in the accounts*, make a *trial balance* of *totals*, *balance the Cash account* and *close the Merchandise accounts*.

Oct. 1 R. Sudnik began business, investing cash $7500.
2 Paid one month's rent $60.
3 Bought merchandise for cash $530.25.
4 Bought stationery and supplies for office use $18.75.
5 Sold merchandise for cash $550.
6 Bought of Jackson & Co. on account $250.
8 Sold to Freeman & Sons on account merchandise $125.
8 Paid Jackson & Co. $175 to apply on account.
9 Sold merchandise to Gregory & Co. on account $322.25.
10 Bought on account merchandise from E. P. Bacon $900.
11 Received cash to apply on account from Freeman & Sons.
12 Paid Bacon $450 to apply on account.
14 Paid for clerk hire $50.
14 Paid for stamps and postals $15.
15 Sold merchandise to Henry Janes for cash $255.
20 Bought from Smith & Brown merchandise for cash $350.

Merchandise Inventory, $537.50.

Enter transactions *in the accounts*. Make a trial balance of *totals*. *Balance* the *Cash account* and *close* the *Merchandise accounts*.

Make out a *check* in each case where merchandise was bough for *cash*.

Make out a *check* where payment was made on account by the Proprietor.

Assignment:

AIM—To introduce Payroll, Bank Account, Checks, Receipts and Money Order.

You are bookkeeper for the Dry Goods firm of Henry Allen & Co., record the following business transactions:

Henry Allen & Co. began business on November 3, 1920 at 361 Main St. your city with an investment of $1509.

Mr. Allen has decided to open a bank account, and has selected The Second National Bank of Stamford, Conn. as the institution with which to do business. (Open the bank account.)

Make out a deposit slip for the investment of $1500. Take your money or check to the bank teller and have him enter the amount of the deposit in your bank pass book. Make a record of this transaction on the stub of your check book. Make the entry in your cash book.

Nov. 3. Paid N. Y. Herald for adv. in daily edition, $50.
Make out the check for the same and record in cash book and on stub of check.

Nov. 4. Paid for office stationery, $5 (Cash).

Nov. 5. Bought of Brown & Co. the following invoice:

5 pcs. English Serge 28, 32, 30, 26, 29 at $1.35 a yd.
2 pcs. Royal Flannel 27, 36, at $.37 1/2 a yd.
4 pcs. Holly's Landsdown 30, 42, 61, 47 at $.90 a yd.

Terms: 3/10, 2/5, n/60.
Trade Discount 5%, 10% & 15%.

Make out a duplicate of the invoice and verify the extensions on the calculating machine.

Nov. 6. Send the firm check to the owner of the building, Smith & Brown, for the rent of the store for the month of November, $75, and record the necessary data on the stub of the check book.

Nov. 7. Sold Mrs. H. Jenkins:
15 yds Yorkshire Muslin at $.06 per yd.
21 yds English Serge at $1.36 per yd.
She paid by giving you her check for the amount.
Make out a receipt for this cash sale of merchandise.

(Is a receipt necessary in a case similar to this transaction? Explain cancelled check as being used as a receipt or voucher.)

Nov. 8. Paid check to Gas & Electric Co. for bill rendered, 2567 cubic feet at $.80 per M.

Nov. 10. Bought of Gimbel & Co. on 60 days' Terms 3/5, 2/10. n/60. Trade discount 5%, 10% & 2%.

978 yds Silk at $1.54 per yd.
384 yds Poplin at $1.37 per yd.
754 yds French Storm Serge at $.45 per yd.

Nov. 11. Sold Mary Bliss:

25 yds French Serge at $1.35 per yd.
16 yds Silk Poplin at $2.25 per yd.

Make out a statement and receipt it, as she settled the account by giving James Bliss's check. See that the check is properly indorsed.

Nov. 13. Send Smith, Brown & Co. a money order for $100 to pay for 250 yds of Fancy Prints at $.04 per yd.

Nov. 14. Paid $.58 in cash for a package by Parcel Post, insured.

Nov. 15. Make out the payroll for the employees of the firm. Rate per day of ten hours given; day consists of 10 hours work per day.

Employees:

F. Smith, Manager, $5 per day, M10, T10, W9, T10, F9, S10 Total for week .....

H. Scheller, Clerk, $3 per day, M10, T9, W10, T9, F8, S10.

R. Gorden, Clerk, $3 per day, M9, T10, W9, T10, F9, S9.

F. Walker, Cashier, $2.50 per day, M10, T9, W8, T7, F10, S9.

Student, Bookkeeper, $3 per day, M10, T10, W10, T9, F9, S10.
H. Ernest, Office Boy, $1.25 per day, M10, T10, W10, T9, F10, S9.
J. Lang, Janitor, $1.75 per day, M10, T10, W10, T10, F9, S10.

Make out the payroll and find the amount due each employee and the total amount of the payroll for the employees.

Make out a currency memorandum.

Make out a payroll check and have the Treasurer of the firm or the person who is authorized to sign all firm checks, sign it for you.

Nov. 17. Send a check for $100 to the Underwood Typewriter Co. for a typewriter for the office. Make out check and record necessary data on the stub of your check book.

Nov. 18. Paid in Cash $15 for insurance on goods in the store.

Nov. 18. Pay Gimbel & Co. for merchandise purchased on Nov. 10. Deduct the cash and trade discounts allowed, and send check for the amount due. (Explain the difference between the net amount of check sent and the entry in your cash book).

Nov. 20. Received cash for petty sales to-day, $10.25.

Nov. 21. You received a statement from the Bank, also the vouchers or cancelled checks. This statement shows your total credits, total debits, and the bank balance. Reconciliate your bank balance.
Check up your check book from the record on the stubs with statement received from the Bank. Adjust the difference if necessary.

Similar problem:

Total Deposits	10205.94
Total Checks	6009.48
True Bank Balance	4196.46

Checks Out:

Nos.		
35	103.63	
27	66.37	
45	90.04	
52	283.69	543.73
Bank's Balance		4740.19
True Balance		4196.46

Note: Enter all of the above transactions in the proper accounts, all purchases and sales in the merchandise sales and purchases accounts and cash transactions in the cash account.

Nov. 30. We find that we have on hand merchandise valued at at $254 after inventory has been taken.

Calculations and Accounts

1. Jan. 1 F. A. Jonson began business, investing cash $7800. On Dec. 31 his books show the following results: Cash Balance $8425.50. A. B. Hendricks owes him $2400; he owes F. T. Green $1425; he also owes the Commercial Bank of N. Y. $3400 on a 60-day note; his furniture is valued at $450; there are stationery and office supplies on hand worth $125, and real estate worth $3000.

   Make a balance sheet showing F. A. Jonson's present worth and net gain for the year 1921.

2. Open *accounts* on ledger paper and enter the following transactions.

   July 1 You, as proprietor, invest cash $5000.
   2 Buy merchandise from F. C. Arnold, terms 30 days $2500.
   2 Buy merchandise for cash $1300.
   3 Paid rent $75.
   4 Bought delivery wagon $1200.
   6 Paid office salaries $40.
   8 Sold merchandise for cash $460.
   9 Sold merchandise to J. Brown $1800.
   10 Proprietor withdrew for private use cash $50.
   Inventory. Merchandise $1900
   Delivery wagon . . . $1000

   Close the accounts. Show the profit and loss.

3. What is the effect of the following transactions.

   1. Paid James Rice $100 on account.
   2. Paid rent in advance $150.
   3. Proprietor presented $25 worth of merchandise from his stock to his daughter.
   4. Bought merchandise on account from A. Hern, $200.
   5. Received from the Brown Co. a check for $50 for having the best window display on their goods.

4. The bank's statement of Nov. 30 shows that during the month I have deposited $8427.85 and that my cancelled checks amount to $4787.92. My check book shows a balance of $3139.93. Checks outstading are as follows: #68, $50; #72, $150; #75, $300.

   Make a statement reconciling bank balance and check-book balance.

Telephone Directory

New York City

Look up the following in the General Telephone Directory, and write the name of the Firm or Person, address, telephone exchange, and telephone number:

Astor Safe Deposit	602 West 141 Street
Underwood Typewriter Co.	O'Mara & Ormsbee
Hotel Marseilles	Mount Sinai Hospital
Bellevue Hospital	Mayor's Office, City Hall
Morgan O'Brien, Law Office	N. Y. Eye and Ear Infirmary

Julia Richman High School at 421 East 88th Street

Send an Emergency call to the Lenox Exchange for an ambulance.

National Biscuit Col, Sales Agency.

Lost Article Department, Grand Central Terminal.

Washington Heights Branch, N. Y. Public Library.

Burroughs Calculating Machine Co., Repair Department.

Roneo Company, Department of Repairs.

Elliott-Fisher Co., Sales Department.

A. B. Dick Mimeograph Co., Repair Department.

Library Bureau, Sales Department.

Dalton Adding Machine Co., Repair Department.

Interborough Rapid Transit Co., General Offices.

Irving National Bank.

J. D. Hamill, M.D.

Andrew Davey, Inc.

Century Magazine.

Bankers' Trust Company.

Public School 186 at West 145th Street.

Western Union Telegraph Co., Messenger Department.

A. B. Altman, Art Department.

Consult the *Classified* Telephone Directory and give the name, address, and the telephone number of ten (10) lawyers,

accountants, druggists, doctors, dry goods concerns, hospitals, butchers, contractors, plumbers, and real estate concerns.

Give the names and addresses with their telephone numbers of fifteen (15) business men whose telephone is listed in the following telephone exchanges in New York City·

Rector	Broad	Madison Square	Lenox
Schuyler	Chelsea	Riverside	Audubon
	Grammercy	Murray Hill	

Plan your telephone conversation in each case. Make out a memorandum of each telephone call—Outgoing and Incoming calls.

Make out a memorandum of the following telephone numbers, indicating Name of Firm, Address, Telephone Exchange, and Telephone Number:

1. Astor Safe Deposit, 602 West 141st Street.
2. Underwood Typewriter Co., Repair Department.
3. Julia Richman High School, East 77th Street, Annex.
4. Send an Emergency call to the Broad Exchange for an ambulance.
5. O'Mara & Ormsbee, 320 Fifth Avenue.
6. National Biscuit Co., General Office—Sales Agency.
7. Information Bureau, New York Central R. R.
8. Lost Article Department, Grand Central Terminal.
9. Hotel Marseilles, Pennsylvania, Commodore, and Astor.
10. Mount Sinai Hospital.
11. Bellevue Hospital.
12. Mayor's Office, City Hall.
13. United Cigar Store, #16, at 352 6th Avenue.
14. Morgan J. O'Brien, Law Office.
15. N. Y. Eye and Ear Infirmary.
16. Washington Heights Branch Public Library.

Look up Telephone Exchange and Number of 15 business men whose telephone is listed in Rector, Broad, and Madison Square. After listing the telephone number, plan your conversation before telephoning.

Suburban Telephone Directory

Section 2: Long Island
2: New Jersey
3: Rockland County
4: Westchester County
5: Connecticut (Darian, New Canaan and Stamford)

Make out a memorandum of the following, placing telephone numbers to the right of the names and addresses:

Charles Frank Cartledge, Locust Valley, L. I.
Fred Cort. Cedarhurst, L. I.
R. V. C. Theatre, 241 Merrick Road, L. I.
H. M. Young, Woodhaven, L. I.
Acker, Merrall & Condit Co., Montclair Store, 599 Bloomfield Avenue.
The Bellevue Hotel, Bay Mead, N. J.
Burroughs Adding Machine Co., 126 Market St., N. J.
The Coast Service System Emply, Kemth Bldg, N. J.
National Bank, 390 George Street, New Rochelle.
Sperry & Hutchinson, 11 Division Street, N. J.
Stamford Gas & Electric Co., 11 Bank Street, Stamford.
Adams Express Co., 17 Union Avenue, New Rochelle (Westchester Division).
American Express Co., 26 Warburton Avenue, Yonkers.
King School Inc., Conn. Division, Stamford.
Red Cross Headquarters, Conn. Division, Stamford.
Borden's Condensed Milk Co., Brooklyn, N. Y.
James Butler Inc., Cedarhurst, L. I.
Huntington Public School, Huntington, L. I.
Long Island Railroad, Belleport, L. I.
Archibald MacFarland, Freeport, L. I.
Post Office, Glen Cove, L. I.
South Side High School, Rockville Centre, L. I.

Adams Express Co., Belmar, N. J.
Atlantic & Pacific Tea Co., Newark, N. J.
Delaware, Lackawanna & Western Coal Co., Summit, N. J.
Irving DeWitt, Red Bank, N. J.
Stamford High School, Stamford, Conn.
Clerk's Office, Babylon, L. I.

Bullinger's Post Office, Express, and Freight Guide

This book contains the names of every post office, railroad station, boat landing and United States ports, with the railroad or water route on which every place or the nearest communicating point is located, and the shipping directions by express or freight line from New York City.

For any place not located directly on a railroad it gives the nearest railroad station. It designates which post offices are money order offices, and the location of county seats.

On pages 57 to 902 are the names of all the post offices and all the railroad stations in the United States. All names printed in roman type are post offices.

R. F. D. means rural free delivery. Mail matter for those places should bear the name of the post office from which the rural delivery is made. The names to which a star is prefixed are money order post offices.

The names in capital letters are state capitals.

The names followed by a small c. h. are county seats.

Assignment:

State the route or nearest station on which the following place, county and state is located. Also state the express company which delivers packages in New York. State whether the place is a money-order post office or a R. F. D. station.

Abbott, Hill County, Texas.
Aron Park, De Soto, Fla.
Buffalo, Erie, New York.
Haynesville, Richmond, Va.
Arrington, Nelson, Va.
Belmont, Wabash, Ill.
Deep River, Middlesex, Conn.
Knoxville, Knox, Tenn.

McDonald, Muna Walker, Ala.
Zona, Benton, Mo.
Providence, R. I.
St. James, Suffolk, N. Y.
Stamford, Fairfield, Conn.
Utica, La Salle, Ill.
Warsaw, Benton, Mo.
Yates City, Knox, Ill.
Milwaukee, Wis.
Port Washington, Nassau, N. Y.
Riverside, Fairfield, Conn.
South Norwalk, Fairfield, Conn.
Trenton, Mercer, N. J.
Valley Forge, Chester, Pa.
West El Paso, Dona, New Mexico.

New York City Directory

In Term I your course in CIVICS included a consideration of our city government:

Obtain the following information in regard to our city government:

1. Name of the
   a. Mayor.
   b. Borough presidents of Manhattan, Bronx, Brooklyn, Queens.
   c. Comptroller.
2. Department of Correction:
   a. Where located.
   b. Name of the commissioner.
   c. What institutions are under his charge.
3. Department of Education:
   a. Where located.
   b. Name of the city superintendent.
   c. How many colleges, high schools, and elementary schools in Manhattan are under its jurisdiction?
4. Health Department:
   a. Where located.
   b. Name of the president.
5. Where do you go to pay your tax bills?
6. Bureau of Chief of Fire Department:
   a. Where located
   b. Name of the chief.

Select 10 names of people living on:

Fifth Avenue above No. 503
Madison Avenue above No. 25
Riverside Drive above 10 West 72nd St.
Irving Place
Park Avenue
Hamilton Terrace
81st Street—1 East 81st (East of 5th Ave.

2. Write the name and the address of the following:

Le Roy, Stuyvesant
Whitehouse, Worthington
Guggenheim, William
Gary, Elbert H.
Wormser, Louis
Sherman, William Watts
Reid, Daniel Gray
Parson, Harry E. (Mrs.)
Astor, Vincent (Mrs.)
Gould, George (Mrs.)
McGivney, Mabel (Mrs.)
Vanderlip, Mr. & Mrs. Frank A.
Vanderbilt, Grace (Miss)
Carnegie, Andrew (Mrs.)

3. Look through the advertisements and write a paragraph stating style of letters used (Upper or Lower case), and whether in your judgment the advertisement would make a good poster, and why. Use knowledge taught you by your drawing teacher.
4. Give the names and addresses, and class of business of twenty different firms advertising in the Blue Book.
5. Consult the theater diagrams at the back of the book and select seats for parties of six in each of the following theatres:

Astor Belasco Booth Cort Criterion Empire
Globe Geo. M. Cohan

at is a syndicate? An alliance? A
her words for club.

World Almanac

ostage on letters to Canada, Eng-
and Newfoundland?
r countries differ?
nted matter and newspapers to
ba?
al cards to all countries?
ples of merchandise?
Parcel Post rates?
n reference to postal savings.
reference to sending sealed

reference to the delivery of
, husband's or wife's and

received a letter not ad-

A, B's back of guide

alphabetically.

f alphabetical list,
ver.

c. Plan of classification. (Read this carefully.)
d. Note class 2 (Nos. 180 to 315.)
e. Define word "space." (Use regular dictionary for this purpose.)
f. Select from the *Thesaurus* 20 words relating to space, as follows:

5 words relating to existence in space.
5 " " " " " linear measure.
5 " " " general form.
5 " " " motion in general.

Assignment:

1. Word: ship—(noun).

Business words:

Transport—merchant ship—packet—liner—lighter.
Look in the *Dictionary* for the exact meaning of each of these words.
Write one sentence containing each, showing the definitior of each word.
Find differences between schooner, cutter, barge, tug.
Write uses of ferryboat, canal boat, gig, jolly boat, raft.
What is a coracle, a gondola, a canoe, a launch, a yacht?
Have you had any of the above words in your reading in the English Department classes? Where? Which lines in your reading would require a knowledge of the above words?

2. Find seven words that mean a *writer*.

Give definitions (using the dictionary if necessary) of each, bringing out clearly the differences in meaning. For instance, tell just how a stenographer differs from a typist, both being writers.

3. Suppose that you work for a corporation. You wish to find out about the corporation. Look up the word. What other words mean the same as a corporation? Find other

words for firms. What is a syndicate? An alliance? A trade union? Find other words for club.

The World Almanac

Postal Information:

1. What are the rates of postage on letters to Canada, England, Dutch West Indies, and Newfoundland?
2. How do the rates to other countries differ?
3. What are the rates on printed matter and newspapers to Canada, Panama, and Cuba?
4. What are the rates on postal cards to all countries?
5. What are the rates on samples of merchandise?
6. What are the International Parcel Post rates?
7. State the postal regulations in reference to postal savings.
8. State the postal regulations in reference to sending sealed packages through the mails.
9. State the postal regulations in reference to the delivery of pension checks, prisoners' mail, husband's or wife's and minor's mail.
10. What should a person do if he received a letter not addressed to him?

Vertical File

Card Index Filing

1. Arrange the alphabetical guide cards.
2. Select about 25 cards.
    1. Arrange them alphabetically.
    2. File all A's back of guide card A, B's back of guide card B.
    3. Take all A's and arrange them alphabetically.
    4. Place back of guide card A.
    5. Do the same with each letter of alphabetical list, using the cards in the small drawer.

3. Arrange the guide cards for Numeric (numbers), Subject (kind of business), and Geographic (city and state Filing).

File a card Alphabetically.
" " " According to the subject.
" " " Geographically.
" " " Numerically.

4. Arrange all the cards behind each guide card Alphabetically. On your Memorandum write:

Name of Firm	Address of Firm	Business	File Number of Firm

Incoming Mail

1. Arrange all the mail received this A. M. Cut each envelope as directed in the text.
2. Adjust the *date stamp* and stamp all letters in the upper right-hand corner with the correct date.
3. If any letter is to be called to the attention of any special member of our firm, underline his name with a red pencil.
4. Underline the *file number*, *name*, or *subject* or address in red pencil for *filing purposes*.
5. If letters are to be filed *alphabetically* underline the *name* only.
6. Distribute letters to the various departments as explained in the text.
7. When letters are returned from the various departments to the filing department file them in the vertical filing cabinet.
8. On your memorandum write the name, address, and the date of each letter. As a check on your ability to file letters also write the letter of the *guide card* behind which you are to file each letter.

Outgoing Mail

1. Collect the mail which is ready to be sent to the post office.
2. Fold each letter, and on the last fold write the *name*, *city*, and the *state* (the address) of the firm to whom the letter is to be sent.
3. Place a stamp or the proper amount of postage in the upper right-hand corner of each letter or package.
4. Write the amount of postage on the stamp.
5. Weigh the letter or package to determine the amount of postage due.
6. Before folding the letter, examine each letter or package for signature and any enclosure.
7. Place all letters when ready for the post office in the *Outgoing Mail* basket.
8. On your memorandum write the *name*, *address*, and the *date* of all letters sent out from our outgoing mail department.
9. Send the carbon copies to the filing department.

An Act for Codifying the Laws relating to the *Sale of Goods*

(20 February, 1894)

Formation of the Contract

Contract of Sale

1. (1) A contract of sale of goods is a contract whereby the seller transfers or agrees to transfer the property in goods to the buyer for a money consideration, called the price. There may be a contract of sale between one part owner and another.

   (2) A contract of sale may be absolute or conditional.

   (3) Where, under a contract of sale, the property in the goods is to be transferred from the seller to the buyer the contract is called a sale; but where the transfer of the property in the goods is to take place at a future time, or

is subject to some condition thereafter to be fulfilled, the contract is called an agreement to sell.

(4) An agreement to sell becomes a sale when the time elapses or the conditions are fulfilled subject to which the property in the goods is to be transferred.

2. Capacity to buy and sell is regulated by the general law concerning capacity to contract, and to transfer and acquire property; provided that where necessaries are sold and delivered to infant, or minor, or to a person who by reason of mental incapacity is incompetent to contract, he must pay a reasonable price therefor. Necessaries in this section means goods suitable to the condition in life of such infant or other person, and to his actual requirements at the time of the sale and delivery.

Formalities of the Contract

3. Subject to the provisions of this act and of any statute in that behalf, a contract of sale may be made in writing (either with or without seal) or by word of mouth, or partly in writing and partly by word of mouth, or may be implied from the conduct of the parties.

4. (1) A contract for the sale of any goods of the value of ten pounds (about ($50) or upwards shall not be enforceable by action unless the buyer shall accept part of the goods so sold and actually receive the same, or give something in earnest to bind the contract or in part payment or unless some note or memorandum in writing of the contract be made and signed by the party to be charged or his agent in that behalf.

(2) The provision of this section apply to every such contract notwithstanding that the goods may be intended to be delivered at some future time, or may not at the time of such contract be actually made, procured, or provided, or fit or ready for delivery, or some act requisite for the

making or completing thereof, or rendering the same fit for delivery.

(3) There is an acceptance of goods within the meaning of this section when the buyer does any act in relation to the goods which recognizes a pre-existing contract of the sale, whether there be an acceptance in performance of the contract or not.

Subject Matter of the Contract

5. (1) The goods which form the subject of a contract of sale may be either existing goods, owned or possessed by the seller, or goods to be manufactured or acquired by the seller after the making of the contract of sale, in this act called "future goods."

(2) There may be a contract for the sale of goods, the acquisition of which by the seller depends upon a contingency which may or may not happen.

(3) Where by a contract of sale the seller purports to effect a present sale of future goods, the contract operates as an agreement to sell the goods.

6. Where there is a contract for the sale of specific goods and the goods without the knowledge of the seller have perished at the time when the contract is made, the contract is void.

7. Where there is an agreement to sell specific goods, and subsequently the goods, without any fault on the part of the seller or buyer, perish before the risk passes to the buyer, the agreement is thereby voided.

The Price

8. (1) The price in a contract of sale may be fixed by the contract or may be left to be fixed in manner thereby agreed, or may be determined by the course of dealing between the parties.

(2) Where the price is not determined in accordance with

the foregoing provisions the buyer must pay a reasonable price. What is a reasonable price is a question of fact dependent on the circumstances of each particular case.

9. (1) Where there is an agreement to sell goods on the terms that the price is to be fixed by the valuation of a third party and such third party cannot or does not make such valuation, the agreement is voided; provided that if the goods or any part thereof have been delivered to and appropriated by the buyer he must pay a reasonable price therefor.

(2) Where such third party is prevented from making the valuation by the fault of the seller or buyer, the party not in fault may maintain an action for damages against the party in fault.

Conditions and Warranties

10. (1) Unless a different intention appears from the terms of the contract stipulations as to time of payment are not deemed to be of the essence of a contract of sale. Whether any other stipulation as to time is of the essence of the contract or not depends on the terms of the contract.

(2) In a contract of sale "month" means prima facie calendar month.

12. In a contract of sale, unless the circumstance of the contract are such as to show a different intention there is:

(1) An implied condition on the part of the seller, that in the case of a sale he has a right to sell the goods, and that in the case of an agreement to sell he will have a right to sell the goods at the time when the property is to pass.

(3) An implied warranty that the goods shall be free from any charge or encumbrance in favor of any third party, not declared or known to the buyer before or at the time when the contract is made.

13. When there is a contract for the sale of goods by descrip-

tion, there is an implied condition that the goods shall correspond with the description; and if the sale is by sample as well as by description, it is not sufficient that the bulk of the goods corresponds with the sample if the goods do not also correspond with the description.

14. Implied conditions as to quality or fitness.

(1) Where the buyer, expressly or by implication, makes known to the seller the particular purpose for which the goods are required, so as to show that the buyer relies on the seller's skill or judgment and the goods are of a description which it is in the course of the seller's business to supply (whether he be the manufacturer or not) there is an implied condition that the goods shall be reasonably fit for such purpose, provided that in the case of a contract for the sale of a specified article under its patent or other trade name, there is no impled condition as to its fitness for any particular purpose:

(2) Where goods are bought by description from a seller who deals in goods of that description (whether he be the manufacturer or not) there is an implied condition that the goods shall be of merchantable quality; provided that if the buyer has examined the goods, there shall be no implied condition as regards defects which such examination ought to have revealed.

(3) An implied warranty or condition as to quality or fitness for a particular purpose may be annexed by the usage of trade.

(4) An expressed warranty or condition does not negative a warranty or condition implied by this Act unless inconsistent therewith.

Sale by Sample

15. (2) In the case of a contract for sale by sample:

(a) There is an implied condition that the bulk shall correspond with the sample in quality:

(b) There is an implied condition that the buyer shall have a reasonable opportunity of comparing the bulk with the sample:

(c) There is an implied condition that the goods, shall be free from any defect, rendering them unmerchantable, which would not be apparent on reasonable examination of the sample.

Transfer of Title

22. (1) Where goods are sold in the market according to the usage of the market, the buyer acquires a good title to the goods, provided he buys them in good faith and without notice of any defect or want of title on the part of the seller.

24. (1) Where goods have been stolen and the offender is prosecuted to conviction, the property in the goods so stolen revests in the person who was the owner of the goods, or his personal representative, notwithstanding any intermediate dealing with them, whether by sale in the market or otherwise.

Performance of the Contract of Sale

27. It is the duty of the seller to deliver the goods, and of the buyer to accept and pay for them, in accordance with the terms of the contract of the sale.

28. Unless otherwise agreed, delivery of the goods and payment of the price are concurrent conditions, that is to say, the seller must be ready and willing to give possession of the goods to the buyer in exchange for the price, and the buyer must be ready and willing to pay the price in exchange for the possession of the goods.

35. The buyer is deemed to have accepted the goods when he intimates to the seller that he has accepted them, or when the goods have been delivered to him, and he does any

act in relation to them which is inconsistent with the ownership of the seller, or when after the lapse of a reasonable time, he retains the goods without intimating to the seller that he has rejected them.

Rights of Unpaid Seller Against the Goods

39. (1)—(a) A lien on the goods or right to retain them for the price while he is in possession of them.
(b) In case of the insolvency of the buyer, a right of stopping the goods in transitu after he has parted with the possession of them.

43. (1) The unpaid seller of goods loses his lien or right of retention thereon—
(a) When he delivers the goods to a carrier or other bailee or custodier for the purpose of transmission to the buyer without reserving the right of disposal of the goods:
(b) When the buyer or his agent lawfully obtains possession of the goods.

Stoppage in Transitu

44. Subject to the provisions of this Act, when the buyer of goods becomes insolvent, the unpaid seller who had parted with the possession of the goods has the right of stopping them in transitu, that is to say, he may resume posesssion of the goods as long as they are in course of transit, and may retain them until payment or tender of the price.

45. (1) Goods are deemed to be in course of transit from the time when they are delivered to a carrier by land or water or other bailee or custodier for the purpose of transmission to the buyer, until the buyer, or his agent in that behalf, takes delivery of them from such carrier or other bailee or custodier.
(2) If a buyer or his agent in that behalf obtains delivery of the goods before their arrival at the appointed destination the transit is at an end.

58. In case of a sale by Auction.
(2) A sale by auction is complete when the auctioneer announces its completion by the fall of the hammer, or in other customary manner. Until such announcement is made any bidder may retract his bid.

62. "Buyer" means a person who buys or agrees to buy goods.
"Delivery" means voluntary transfer of possessions from one person to another.
"Quality of Goods" includes their state or condition.
"Sale" includes a bargain and sale as well as a sale and delivery.
"Seller" means a person who sells or agrees to sell goods.
"Specific Goods" means goods identified and agreed upon at the time a contract of sale is made.
"Warranty" means an agreement with reference to goods which are the subject of a contract of sale, the breach of which gives rise to a claim for damages, but not to a right to reject the goods and treat the contract as repudiated.
(2) A thing is deemed to be done "in good faith" within the meaning of this Act when it is in fact done honestly, whether it be done negligently or not.
(3) A persons is deemed to be insolvent within the meaning of this Act who either has ceased to pay his debts in the ordinary course of business, or cannot pay his debts as they become due, whether he has committed an act of bankruptcy or not, and whether he become a notour[1] bankrupt or not.
(4) Goods are in a "deliverable state" within the meaning of this Act when they are in such a state that the buyer would under the contract be bound to take delivery of them.

64. This Act may be cited as the *Sale of Goods Act, 1893*.
This statute has been re-enacted with modifications in al-

[1] (Scot) Well-known.

most every state of the United States. Its provisions and the language in which they are clothed, may vary, but in substance, it is almost identical, in all of them in respect of sales and agreements to sell.

The price (ten pounds) about $50, changes in different states, ranging from $30 to $300, except in Iowa and Florida, where the amount is unlimited; $30 is the amount in Maine, Missouri, New Jersey, and Arkansas, and $300 in Utah and Montana. In most of the other states of the United States the limit is $50 (see Appendix—Gano's Essentials of Business Law).

COMMERCIAL ABBREVIATIONS AND GENERAL BUSINESS TERMS

@—at or to
A1—first class
acct. or a/c—account
acct. sales—account of sales
adv. or ad.—advertisement
agt.—agent
A. M.—before noon
Master of Arts
amt.—amount
b/b—bill book
bbl.—barrel
bdl.—bundle
b/l—bill of lading
b/s—bill of sale
B. O.—Buyer's option
bu.—bushel
bxs.—boxes
ck.—check
c/o—care of
Co.—company or county
c. i. f.—cost, insurance, and freight
c. o. d.—collect on delivery
com.—commission
Cr.—credit or creditor
c. w. o.—cash with order
cwt.—hundredweight
dep.—deposit
disc.—discount
do.—ditto
doz.—dozen
$—dollar (s)
Dr.—debit, debtor, or Doctor
E. E.—errors excepted
E. & O. E.—errors and omissions excepted
e. g.—for example
etc.—and so forth
ex.—example
exch.—exchange
f. o. b.—(point named, as N. Y. C.) free on board cars or lighters at the point named
f. o. b.—(point on seaboard named) all freight charges paid from forwarding point to port on seaboard
f. o. b cars.—(port named L. C. L.) less than a carload lot
f. o. b. cars—(within lighterage limits) lighterage free
f. o. b. on vessel—(port named) all expenses up to and including delivery of the goods upon the overseas vessel or steamer at a named port

f. o. b. vessel—(port named) delivery of goods free of charges alongside overseas vessel or steamer and within reach of its loading tackle

c. & f.—(named foreign port) as London, England, seller willing to pay transportation charges or the cost and freight to a foreign point of delivery

fol.—folio
ford.—forward
frt.—freight
ft.—foot (feet)
gal.—gallon
gro.—gross
hhd.—hogshead
I. O. U.—I owe you
in. or "—inches
i.e.—that is
ins.—insurance
inst.—instant; the present montn
int.—interest
inv.—invoice
invy.—inventory
lb.—pound
L & G—loss and gain
Messrs.—Gentlemen
mdse.—merchandise
mem.—memorandum
mo.—month
#—number (if written before a figure)
point (if written after a figure)
N. B.—take notice
O. K.—correct
oz.—ounce
%—per cent
pcs.—pieces
pd.—paid
per—by
pkg.—package
p.—page
P. O.—post office
P. S.—postscript
rec'd—received
rect.—receipt
R. F. D.—rural free delivery
R. R.—railroad
shipt.—shipment
S. S.—steamship
Str.—steamer
ult.—ultimo, or last month
U. S. M.—United States Mail
via—by way of
viz—to wit; namely
vs.—against
w/b—waybill
yd.—yard
yr.—year

THE END